

# VSOS VOCATIONAL SUBJECTS SYLLABUS

## TABLE OF CONTENTS

<b>1.0 VSOS Vocational Short-Term Courses Catalog (6 Months / 1 Year)</b>	<b>20</b>
1.1 Eligibility Criteria – Vocational Skill Open Schooling (VSOS) Board	20
1.2 Engineering & Technical	21
<b>1.3 Commerce &amp; Office Skills</b>	<b>21</b>
<b>1.4 Hospitality &amp; Service</b>	<b>22</b>
1.5 Information Technology	22
<b>1.6 Agriculture &amp; Allied</b>	<b>22</b>
<b>1.7 Health &amp; Paramedical</b>	<b>23</b>
<b>1.8 Design, Art, &amp; Media</b>	<b>23</b>
<b>1.9 Other Trades</b>	<b>23</b>
<b>1.10 VSOS Vocational Paramedical Courses</b>	<b>24</b>
1. Medical Lab Assistant	24
2. Pharmacy Assistant	24
4. Physiotherapy Assistant	24
5. Operation Theatre (OT) Assistant	24
6. Nursing Care Assistant	25
7. Emergency Medical First Responder (EMFR)	25
8. Dental Chairside Assistant	25
9. Vision Technician (Optical Assistant)	25
10. Dialysis Technician Assistant	25
<b>1.11 IKS-Based Vocational Courses for VSOS</b>	<b>25</b>
1. IKS - Yoga Wellness Assistant	26
2. IKS - Jyotish (Astrology) Basics	26
3. IKS - Vastu Shastra Assistant	26
4. IKS - Ayurveda Lifestyle Assistant	26
<b>1.12 VSOS Vocational Courses – Fire and Safety</b>	<b>27</b>
1. Fire & Safety Assistant	27
2. Industrial Fire Safety Technician	27
3. Hospital Safety Assistant	28
4. Construction Site Fire & Safety Supervisor	28
5. Disaster Management & Emergency Response Assistant	29
<b>2.0 Electrical Wiring &amp; Safety</b>	<b>29</b>
<b>2.1 Unit-Wise Curriculum Breakdown</b>	<b>30</b>
2.1.1 Unit 1: Basics of Electricity & Electrical Tools	30
2.1.2 Unit 2: Wiring Materials & Wiring Systems	30
2.1.3 Unit 3: Domestic Wiring Installation	31
2.1.4 Unit 4: Electrical Safety, Codes & Standards	31
2.1.5 Unit 5: Testing, Maintenance & Troubleshooting	32
2.1.6 Unit 6: Project & Viva	32
<b>2.2 Assessment</b>	<b>33</b>

2.3 Certification Outcome.....	33
3.0 Basic Electronics & PCB Design.....	34
3.1 Unit-Wise Syllabus Breakdown.....	34
3.1.1 Unit 1: Fundamentals of Electronics.....	34
3.1.2 Unit 2: Active Devices & Circuit Basics.....	35
3.1.3 Unit 3: Introduction to PCB Design.....	35
3.1.4 Unit 4: PCB Fabrication Techniques.....	36
3.1.5 Unit 5: Safety, Quality Control & Standards.....	36
3.1.6 Unit 6: Project, Portfolio & Viva.....	37
3.2 Assessment Pattern.....	37
3.3 Certification Outcome.....	37
4.0 AC & Refrigeration Technician.....	38
4.1 Unit-Wise Syllabus Structure.....	38
4.1.1 Unit 1: Principles of Refrigeration.....	38
4.1.2 Unit 2: Refrigeration System Components.....	39
4.1.3 Unit 3: Electrical & Control Systems in Refrigeration.....	39
4.1.4 Unit 4: Air Conditioning Systems.....	40
4.1.5 Unit 5: Troubleshooting & Repairs.....	40
4.1.6 Unit 6: Safety, Regulations & Green Practices.....	41
4.1.7 Unit 7: Project, Field Training & Viva.....	41
4.2 Assessment Format.....	41
4.3 Certification Outcome.....	42
5.0 CNC Programming & Tool Operation.....	43
5.1 Unit-Wise Syllabus Structure.....	43
5.1 Unit 1: Basics of Manufacturing & Machining.....	43
5.1.2 Unit 2: CNC Machines – Types & Components.....	44
5.1.3 Unit 3: CNC Programming Fundamentals.....	44
5.1.4 Unit 4: CNC Machine Operation.....	45
5.1.5 Unit 5: Maintenance, Safety & Troubleshooting.....	45
5.1.6 Unit 6: Project, Review & Viva.....	46
5.2 Assessment Criteria.....	46
5.3 Certification Outcome.....	46
6.0 Welding & Fabrication Techniques.....	47
6.1 Unit-Wise Curriculum Structure.....	47
6.1.1 Unit 1: Introduction to Welding & Workshop Safety.....	47
6.1.2 Unit 2: Arc Welding (SMAW).....	48
6.1.3 Unit 3: Gas Welding (Oxy-Acetylene).....	48
6.1.4 Unit 4: TIG/MIG Welding Techniques.....	49
6.1.5 Unit 5: Sheet Metal Work & Fabrication.....	49
6.1.6 Unit 6: Welding Inspection & Quality Control.....	50
6.1.7 Unit 7: Project Work, Portfolio & Viva.....	50
6.2 Assessment Format.....	50
6.3 Certification Outcome.....	51
7.0 Office Secretaryship.....	51

<b>7.1 Unit-Wise Curriculum Structure.....</b>	<b>52</b>
7.1.1 Unit 1: Introduction to Office Management.....	52
7.1.2 Unit 2: Communication in the Workplace.....	52
<b>7.1.3 Unit 3: Secretarial Duties &amp; Correspondence.....</b>	<b>53</b>
<b>7.1.4 Unit 4: Office Automation &amp; Computer Skills.....</b>	<b>53</b>
<b>7.1.5 Unit 5: Record Keeping &amp; File Management.....</b>	<b>54</b>
7.1.6 Unit 6: Internship / Project Work.....	54
<b>7.2 Assessment Pattern.....</b>	<b>55</b>
<b>7.3 Certification Outcome.....</b>	<b>55</b>
<b>8.0 Basic Accounting &amp; Tax Procedures.....</b>	<b>55</b>
<b>8.1 Unit-Wise Syllabus Structure.....</b>	<b>56</b>
8.1.1 Unit 1: Fundamentals of Accounting.....	56
8.1.2 Unit 2: Books of Original Entry (Journal to Ledger).....	56
8.1.3 Unit 3: Final Accounts for Small Businesses.....	57
8.1.4 Unit 4: Introduction to GST and Indirect Taxation.....	57
8.1.5 Unit 5: Income Tax Basics and TDS.....	58
8.1.6 Unit 6: Project Work & Assessment.....	58
Assessment Pattern.....	59
Certification Outcome.....	59
<b>9.0 Tally ERP &amp; GST Filing.....</b>	<b>59</b>
<b>9.1 Unit-Wise Syllabus Structure.....</b>	<b>60</b>
9.1.1 Unit 1: Fundamentals of Tally & Company Setup.....	60
9.1.2 Unit 2: Accounting Entries in Tally ERP.....	60
9.1.3 Unit 3: GST Configuration in Tally.....	61
9.1.4 Unit 4: GST Accounting Transactions.....	61
9.1.5 Unit 5: GST Return Filing (Practical Exposure).....	62
9.1.6 Unit 6: Project Work & Viva.....	62
9.2 Assessment Pattern.....	63
9.3 Certification Outcome.....	63
<b>10.0 Banking &amp; Microfinance Basics.....</b>	<b>63</b>
<b>10.1 Unit-Wise Syllabus Structure.....</b>	<b>64</b>
10.1 Unit 1: Indian Financial System & Banking Overview.....	64
10.1.2 Unit 2: Banking Operations & Accounts.....	64
10.1.3 Unit 3: Loans, Credit & Documentation.....	65
10.1.4 Unit 4: Microfinance Concepts & SHGs.....	66
10.1.5 Unit 5: Financial Literacy, Customer Service & Fraud Prevention.....	66
10.1.6 Unit 6: Project Work, Simulation & Viva.....	66
10.2 Assessment Pattern.....	67
10.3 Certification Outcome.....	67
<b>11.0 Computerized Office Management.....</b>	<b>68</b>
<b>11.1 Unit-Wise Syllabus Structure.....</b>	<b>68</b>
11.1.1 Unit 1: Introduction to Office Management & IT Tools.....	68
11.1.2 Unit 2: Document Preparation (Word Processing).....	68
11.1.3 Unit 3: Office Communication & Presentation Tools.....	69

11.1.4 Unit 4: Data Entry & Spreadsheet Management.....	69
11.1.5 Unit 5: Record Keeping, Cloud Storage & Security.....	69
11.1.6 Unit 6: Mini Project & Viva.....	69
11.2 Assessment Breakdown.....	70
11.3 Certification Outcome.....	70
12.0 Commercial Cooking.....	71
12.1 Unit-Wise Curriculum Breakdown.....	71
12.1.1 Unit 1: Introduction to Culinary Arts & Kitchen Setup.....	71
12.1.2 Unit 2: Ingredients, Measurements & Pre-Preparation.....	71
12.1.3 Unit 3: Cooking Methods & Techniques.....	72
12.1.4 Unit 4: Indian & Continental Cuisine Basics.....	72
12.1.5 Unit 5: Food Safety, Storage & Menu Planning.....	72
12.1.6 Unit 6: Project, Food Demo & Viva.....	73
12.2 Assessment Pattern.....	73
12.3 Certification Outcome.....	73
13.0 Front Office Assistance.....	74
13.1 Unit-Wise Curriculum Breakdown.....	74
13.1.1 Unit 1: Introduction to Front Office Operations.....	74
13.1.2 Unit 2: Communication & Interpersonal Skills.....	75
13.1.3 Unit 3: Guest Check-In, Check-Out & Booking Systems.....	75
13.1.4 Unit 4: Office Administration & Documentation.....	76
13.1.5 Unit 5: Professional Etiquette & Workplace Safety.....	76
13.1.6 Unit 6: Project, Guest Interaction Demo & Viva.....	77
13.2 Assessment Pattern.....	77
13.3 Certification Outcome.....	77
14.0 Housekeeping Operations.....	78
14.1 Unit-Wise Curriculum Breakdown.....	78
14.1.1 Unit 1: Introduction to Housekeeping.....	78
14.1.2 Unit 2: Cleaning Equipment & Supplies.....	79
14.1.3 Unit 3: Guest Room Cleaning & Bed Making.....	79
14.1.4 Unit 4: Public Area Cleaning & Floor Care.....	80
14.1.5 Unit 5: Linen & Laundry Management.....	80
14.1.6 Unit 6: Hygiene, Safety & Supervised Practice.....	81
14.1.7 Unit 7: Final Project, Field Visit & Viva.....	81
14.2 Assessment Format.....	81
14.3 Certification Outcome.....	82
15.0 Bakery & Confectionery.....	83
15.1 Unit-Wise Curriculum Breakdown.....	83
15.1.1 Unit 1: Introduction to Bakery Science & Hygiene.....	83
15.1.2 Unit 2: Breads & Doughs.....	83
15.1.3 Unit 3: Cakes, Batters & Sponges.....	84
15.1.4 Unit 4: Icing, Filling & Decoration.....	84
15.1.5 Unit 5: Cookies, Pastries & Confectionery.....	85
15.1.6 Unit 6: Project Work & Bakery Portfolio.....	85



15.2 Assessment Structure.....	86
15.3 Certification Outcome.....	86
16.0 Web Designing.....	87
16.1 Unit-Wise Curriculum Breakdown.....	87
16.1.1 Unit 1: Introduction to Web Design & Internet Basics.....	87
16.1.2 Unit 2: HTML – The Building Block of Web Pages.....	88
16.1.3 Unit 3: CSS – Styling Web Pages.....	88
16.1.4 Unit 4: JavaScript Basics (Introductory Level).....	89
16.1.5 Unit 5: Web Tools, Hosting & Site Deployment.....	89
16.1.6 Unit 6: Final Project & Portfolio Presentation.....	90
16.2 Assessment Structure.....	90
16.3 Certification Outcome.....	90
17.0 Data Entry & Processing.....	91
17.1 Unit-Wise Curriculum Breakdown.....	91
17.1.1 Unit 1: Introduction to Data Entry Operations.....	91
17.1.2 Unit 2: Typing Skills & Keyboarding Techniques.....	92
17.1.3 Unit 3: MS Word for Document Management.....	92
17.1.4 Unit 4: Spreadsheet (Excel/Google Sheets) Handling.....	93
17.1.5 Unit 5: File Handling, Conversion & Basic MIS.....	93
17.1.6 Unit 6: Project Work & Viva.....	94
17.2 Assessment Format.....	94
17.3 Certification Outcome.....	94
18.0 Hardware & Networking Basics.....	95
18.1 Unit-Wise Curriculum Breakdown.....	95
18.1.1 Unit 1: Basics of Computer Hardware.....	95
18.1.2 Unit 2: Memory, Storage & Power Supply.....	96
18.1.3 Unit 3: Operating System Installation & Maintenance.....	96
18.1.4 Unit 4: Basics of Networking.....	97
18.1.5 Unit 5: Network Sharing, Troubleshooting & Tools.....	97
18.1.6 Unit 6: System Protection & Cyber Hygiene.....	98
18.1.7 Unit 7: Project, Practical Log & Viva.....	98
18.2 Assessment Format.....	98
18.3 Certification Outcome.....	99
19.0 Python / Java Programming.....	100
19.1 Unit-Wise Curriculum Breakdown.....	100
19.1.1 Unit 1: Introduction to Programming Concepts.....	100
19.1.2 Unit 2: Control Structures.....	100
19.1.3 Unit 3: Functions & Modular Coding.....	101
19.1.4 Unit 4: Data Structures (Lists/Arrays).....	101
19.1.5 Unit 5: Object-Oriented Programming (OOP).....	102
19.1.6 Unit 6: Mini Project & Viva.....	102
19.2 Assessment Format.....	103
19.3 Certification Outcome.....	103
20.0 Multimedia & Animation.....	104

20.1 Unit-Wise Curriculum Breakdown.....	104
20.1.1 Unit 1: Introduction to Multimedia.....	104
20.1.2 Unit 2: Graphic Design Principles & Tools.....	105
20.1.3 Unit 3: Audio & Video Editing Basics.....	105
20.1.4 Unit 4: Introduction to Animation & Storyboarding.....	106
20.1.5 Unit 5: 2D Animation Software Tools.....	106
20.1.6 Unit 6: Portfolio Development & Project Work.....	107
20.2 Assessment Pattern.....	107
20.3 Certification Outcome.....	107
21.0 Course Title: AI & ML Foundation Course.....	108
21.1 Unit-Wise Syllabus Structure.....	108
21.1.1 Unit 1: Introduction to AI & ML.....	108
21.1.2 Unit 2: Python for AI & ML (Beginner Level).....	109
21.1.3 Unit 3: Data Handling & Visualization.....	109
21.1.4 Unit 4: Machine Learning Concepts & Tools.....	110
21.1.5 Unit 5: AI Applications using Tools.....	110
21.1.6 Unit 6: Final Project & Presentation.....	111
21.2 Assessment Format.....	111
21.4 Certification Outcome.....	111
22.0 Dairy Technician.....	112
22.1 Unit-Wise Curriculum Breakdown.....	112
22.1.1 Unit 1: Introduction to Dairy Technology.....	112
22.1.2 Unit 2: Milk Collection & Quality Testing.....	113
22.1.3 Unit 3: Milk Preservation & Storage.....	113
22.1.4 Unit 4: Pasteurization & Milk Processing.....	114
22.1.5 Unit 5: Dairy Products Preparation.....	114
22.1.6 Unit 6: Project Work & Practical Assessment.....	115
23.2 Assessment Format.....	115
23.3 Certification Outcome.....	115
24.0 Poultry Farm Assistant.....	116
24.1 Unit-Wise Curriculum Structure.....	116
24.1.1 Unit 1: Introduction to Poultry Farming.....	116
24.1.2 Unit 2: Housing, Equipment & Daily Operations.....	116
24.1.3 Unit 3: Poultry Nutrition & Feed Management.....	117
24.1.4 Unit 4: Disease Management & Vaccination.....	117
24.1.5 Unit 5: Marketing & Record Maintenance.....	118
24.1.6 Unit 6: Project, Field Visit & Viva.....	118
24.2 Assessment Pattern.....	119
24.3 Certification Outcome.....	119
25.0 Basic Horticulture.....	119
25.1 Unit-Wise Syllabus Structure.....	120
25.1.1 Unit 1: Introduction to Horticulture.....	120
25.1.2 Unit 2: Soil, Water, and Nutrient Management.....	120
25.1.3 Unit 3: Nursery Techniques & Plant Propagation.....	121

25.1.4 Unit 4: Fruit & Vegetable Crop Cultivation.....	121
25.1.5 Unit 5: Floriculture & Landscaping.....	122
25.1.6 Unit 6: Plant Protection & Post-Harvest Handling.....	122
25.1.7 Unit 7: Project, Field Visit & Viva.....	123
27.2 Assessment Pattern.....	123
27.3 Certification Outcome.....	123
28.0 Sericulture Worker.....	124
28.1 Unit-Wise Syllabus Structure.....	124
28.1.1 Unit 1: Introduction to Sericulture.....	124
28.1.2 Unit 2: Mulberry Cultivation Techniques.....	124
28.1.3 Unit 3: Silkworm Rearing and Management.....	125
28.1.4 Unit 4: Cocoon Harvesting and Grading.....	125
28.1.5 Unit 5: Silk Reeling (Introductory).....	126
28.1.6 Unit 6: Project, Field Visit & Viva.....	126
28.2 Assessment Structure.....	126
28.3 Certification Outcome.....	127
Health & Paramedical.....	127
29.0 Medical Lab Assistant.....	127
29.1 Unit-Wise Syllabus Structure.....	127
29.1.1 Unit 1: Introduction to Medical Lab Science.....	128
29.1.2 Unit 2: Anatomy, Physiology & Blood Collection.....	128
29.1.3 Unit 3: Laboratory Equipment & Usage.....	129
29.1.4 Unit 4: Hematology & Blood Analysis.....	129
29.1.5 Unit 5: Urine, Stool & Sputum Testing.....	129
29.1.6 Unit 6: Report Writing, Records & Field Work.....	130
29.1.7 Unit 7: Project & Viva Voce.....	130
29.2 Assessment Pattern.....	131
29.3 Certification Outcome.....	131
30.0 Health Care Worker.....	131
30.1 Unit-Wise Curriculum Breakdown.....	132
30.1.1 Unit 1: Introduction to Health Care & Ethics.....	132
30.1.2 Unit 2: Human Body Basics & Vital Signs.....	132
30.1.3 Unit 3: Personal Hygiene & Patient Care Skills.....	133
30.1.4 Unit 4: Nutrition, Medication Support & First Aid.....	133
30.1.5 Unit 5: Mobility, Safety & Waste Management.....	133
30.1.6 Unit 6: Community Health & Final Assessment.....	134
30.2 Assessment Pattern.....	134
30.3 Certification Outcome.....	134
31.0 Yoga & Wellness Trainer.....	135
31.1 Unit-Wise Syllabus Structure.....	135
31.1.1 Unit 1: Introduction to Yoga & Wellness.....	135
31.1.2 Unit 2: Asanas (Postures) and Their Benefits.....	136
31.1.3 Unit 3: Pranayama & Breathwork Techniques.....	136
31.1.4 Unit 4: Meditation & Relaxation Practices.....	137



31.1.5 Unit 5: Diet, Lifestyle & Basic Anatomy.....	137
31.1.6 Unit 6: Training Practice, Assessment & Viva.....	137
31.2 Assessment Pattern.....	138
31.3 Certification Outcome.....	138
32.0 Physiotherapy Assistant.....	138
32.1 Unit-Wise Syllabus Structure.....	139
32.1.1 Unit 1: Introduction to Physiotherapy.....	139
32.1.2 Unit 2: Basic Human Anatomy & Physiology.....	139
32.1.3 Unit 3: Physical Therapy Equipment & Handling Techniques.....	140
32.1.4 Unit 4: Therapeutic Exercises & Supportive Roles.....	140
32.1.5 Unit 5: Rehabilitation for Common Conditions.....	141
32.1.6 Unit 6: Documentation, Project & Viva.....	141
32.2 Assessment Format.....	141
32.3 Certification Outcome.....	142
33.0 Fashion Design Basics.....	142
33.1 Unit-Wise Syllabus Structure.....	143
33.1.1 Unit 1: Introduction to Fashion & Design Principles.....	143
33.1.2 Unit 2: Fashion Illustration & Color Theory.....	143
33.1.3 Unit 3: Textile Science & Fabric Study.....	144
33.1.4 Unit 4: Pattern Making & Garment Construction.....	144
33.1.5 Unit 5: Embellishments & Surface Ornamentation.....	145
33.1.6 Unit 6: Fashion Portfolio, Display & Viva.....	145
33.2 Assessment Format.....	145
33.3 Certification Outcome.....	146
34.0 Interior Decoration.....	146
34.1 Unit-Wise Curriculum Breakdown.....	146
34.1.1 Unit 1: Introduction to Interior Design & Principles.....	146
34.1.2 Unit 2: Elements of Design & Color Theory.....	147
34.1.3 Unit 3: Space Planning & Furniture Layouts.....	147
34.1.4 Unit 4: Materials, Finishes & Soft Furnishings.....	148
34.1.5 Unit 5: Accessories, Styling & Theme Decor.....	148
34.1.6 Unit 6: Mini Project & Viva.....	149
34.2 Assessment Format.....	149
34.3 Certification Outcome.....	149
35.0 Printing & Publishing Skills.....	149
35.1 Unit-Wise Curriculum Breakdown.....	150
35.1.1 Unit 1: Introduction to Printing & Publishing.....	150
35.1.2 Unit 2: Desktop Publishing (DTP) Basics.....	150
35.1.3 Unit 3: Typography & Design Principles.....	151
35.1.4 Unit 4: Pre-Press & Printing Processes.....	151
35.1.5 Unit 5: Publishing Techniques & Content Workflow.....	152
35.1.6 Unit 6: Project & Viva.....	152
35.2 Assessment Format.....	152
35.3 Certification Outcome.....	153



<b>36.0 Graphic Design.....</b>	<b>153</b>
<b>36.1 Unit-Wise Curriculum Breakdown.....</b>	<b>153</b>
36.1.1 Unit 1: Fundamentals of Graphic Design.....	153
36.1.2 Unit 2: Drawing & Concept Sketching.....	154
36.1.3 Unit 3: Design Software – Adobe Photoshop & Illustrator.....	154
36.1.4 Unit 4: Branding & Visual Identity Design.....	155
36.1.5 Unit 5: Layout Design & Publishing.....	155
36.1.6 Unit 6: Portfolio Building & Final Project.....	156
<b>36.2 Assessment Pattern.....</b>	<b>156</b>
<b>36.3 Certification Outcome.....</b>	<b>156</b>
<b>37.0 Plumbing Technician.....</b>	<b>157</b>
<b>37.1 Unit-Wise Curriculum Breakdown.....</b>	<b>157</b>
37.1.1 Unit 1: Introduction to Plumbing & Tools.....	157
37.1.2 Unit 2: Pipes, Fittings & Materials.....	158
37.1.3 Unit 3: Water Supply Systems.....	158
37.1.4 Unit 4: Drainage, Sanitation & Sewage Systems.....	159
37.1.5 Unit 5: Plumbing Maintenance & Repair.....	159
37.1.6 Unit 6: Project Work & Viva.....	159
<b>37.2 Assessment Format.....</b>	<b>160</b>
<b>37.3 Certification Outcome.....</b>	<b>160</b>
<b>38.0 Carpentry &amp; Woodwork Basics.....</b>	<b>160</b>
<b>38.1 Unit-Wise Curriculum Breakdown.....</b>	<b>161</b>
38.1.1 Unit 1: Introduction to Carpentry & Safety Practices.....	161
38.1.2 Unit 2: Wood Types, Properties & Seasoning.....	161
38.1.3 Unit 3: Tools, Equipment & Measurements.....	162
38.1.4 Unit 4: Joinery & Basic Construction Techniques.....	162
38.1.5 Unit 5: Wood Finishing & Surface Treatments.....	163
38.1.6 Unit 6: Mini Project & Viva.....	163
<b>38.2 Assessment Format.....</b>	<b>163</b>
<b>38.3 Certification Outcome.....</b>	<b>164</b>
<b>39.0 Beauty &amp; Personal Care.....</b>	<b>164</b>
<b>39.1 Unit-Wise Curriculum Breakdown.....</b>	<b>164</b>
39.1.1 Unit 1: Introduction to Beauty Therapy & Hygiene.....	164
39.1.2 Unit 2: Skin Care & Facial Treatments.....	165
39.1.3 Unit 3: Hair Care & Styling Techniques.....	165
39.1.4 Unit 4: Basic Makeup Application.....	166
39.1.5 Unit 5: Hand, Feet & Personal Grooming.....	166
39.1.6 Unit 6: Project, Client Handling & Viva.....	167
<b>39.2 Assessment Format.....</b>	<b>167</b>
<b>39.3 Certification Outcome.....</b>	<b>167</b>
<b>40.0 Solar Installation &amp; Repair Technician.....</b>	<b>168</b>
<b>40.1 Unit-Wise Curriculum Breakdown.....</b>	<b>168</b>
40.1.1 Unit 1: Introduction to Solar Energy.....	168
40.1.2 Unit 2: Types of Solar PV Systems.....	169

40.1.3 Unit 3: Installation Tools & Safety Practices.....	169
40.1.4 Unit 4: Solar Panel Mounting & Electrical Wiring.....	169
40.1.5 Unit 5: Battery, Inverter & System Maintenance.....	170
40.1.6 Unit 6: Project, Assessment & Viva.....	170
40.2 Assessment Format.....	171
40.3 Certification Outcome.....	171
41.0 Renewable Energy Systems.....	171
41.1 Unit-Wise Curriculum Breakdown.....	172
41.1.1 Unit 1: Introduction to Renewable Energy.....	172
41.1.2 Unit 2: Solar Energy Systems.....	172
41.1.3 Unit 3: Tools, Safety, and System Layouts.....	173
41.1.4 Unit 4: Wind Energy Systems.....	173
41.1.5 Unit 5: Biomass, Hydro, and Hybrid Systems.....	174
41.1.6 Unit 6: Project Work & Sustainability Practices.....	174
41.2 Assessment Pattern.....	174
41.3 Certification Outcome.....	175
42.0 Medical Lab Assistant – 6 Months Program.....	175
42.1 Unit-wise Syllabus.....	175
42.1.1 Unit 1: Introduction to Medical Laboratory Science.....	175
42.1.2 Unit 2: Blood Collection Techniques.....	176
42.1.3 Unit 3: Hematology Basics.....	176
42.1.4 Unit 4: Routine Urine & Stool Examination.....	176
42.1.5 Unit 5: Lab Equipment Handling.....	177
42.1.6 Unit 6: Project Work and Viva.....	177
42.2 Assessment for 6-Month Course.....	177
42.3 Certification Outcome for 6 Months:.....	177
43.0 Medical Lab Assistant – 1 Year Program.....	178
43.1 Unit-wise Syllabus.....	178
43.1.1 Unit 1: Laboratory Safety, Hygiene & Ethics.....	178
43.1.2 Unit 2: Blood Collection and Processing.....	178
43.1.3 Unit 3: Hematology Investigations.....	179
Semester 2: Clinical Pathology and Laboratory Practice.....	179
43.1.4 Unit 4: Clinical Biochemistry.....	179
43.1.5 Unit 5: Urine, Stool, and Body Fluids Examination.....	179
43.1.6 Unit 6: Microbiology (Intro Level).....	179
43.1.7 Unit 7: Internship/Project Work & Viva.....	180
43.2 Assessment for 1-Year Course.....	180
43.3 Certification Outcome for 1 Year:.....	180
44.0 Pharmacy Assistant – 6 Months Program.....	181
44.1 Unit-wise Syllabus.....	181
44.1.1 Unit 1: Introduction to Pharmacy & Healthcare.....	181
44.1.2 Unit 2: Common Medicines & Classification.....	181
44.1.3 Unit 3: Prescription Handling & Labeling.....	182
44.1.4 Unit 4: Pharmacy Operations & Billing.....	182

44.1.5 Unit 5: Basic Pharmacy Ethics and Laws.....	182
44.1.6 Unit 6: Mini Project & Viva.....	182
44.2 Assessment for 6-Month Course.....	183
44.3 Certification Outcome for 6 Months:.....	183
45.0 Pharmacy Assistant – 1 Year Program.....	183
45.1 Unit-wise Syllabus.....	184
45.1.1 Unit 1: Pharmacy Fundamentals and Healthcare Systems.....	184
45.1.2 Unit 2: Drug Classification and Storage.....	184
45.1.3 Unit 3: Pharmacology Basics.....	184
45.1.4 Unit 4: Pharmacy Retail Management.....	185
45.1.5 Unit 5: Drug Regulations & Patient Safety.....	185
45.1.6 Unit 6: Internship, Project & Viva.....	185
45.2 Assessment for 1-Year Course.....	185
45.3 Certification Outcome for 1 Year:.....	186
46.0 Radiology & Imaging Assistant – 6 Months Program.....	186
46.1 Unit-wise Syllabus.....	186
46.1.1 Unit 1: Introduction to Radiology & Imaging.....	186
46.1.2 Unit 2: Human Anatomy for Imaging.....	187
46.1.3 Unit 3: Basics of X-ray Machine Operation.....	187
46.1.4 Unit 4: Patient Preparation & Positioning.....	187
46.1.5 Unit 5: Radiation Safety & Infection Control.....	187
46.1.6 Unit 6: Mini Project & Viva.....	187
46.2 Assessment for 6-Month Course.....	188
46.3 Certification Outcome for 6 Months:.....	188
47.0 Radiology & Imaging Assistant – 1 Year Program.....	188
47.1 Unit-wise Syllabus.....	189
47.1.1 Unit 1: Introduction to Radiologic Technology.....	189
47.1.2 Unit 2: Medical Terminology and Basic Anatomy.....	189
47.1.3 Unit 3: X-ray Machine Setup & Maintenance.....	189
47.1.4 Unit 4: Radiographic Techniques & Patient Safety.....	189
47.1.5 Unit 5: Radiation Protection & Quality Assurance.....	190
47.1.6 Unit 6: Internship, Project Work & Viva.....	190
47.2 Assessment for 1-Year Course.....	190
47.3 Certification Outcome for 1 Year:.....	190
48.0 Physiotherapy Assistant – 6 Months Program.....	191
48.1 Unit-wise Syllabus.....	191
48.1.1 Unit 1: Introduction to Physiotherapy and Ethics.....	191
48.1.2 Unit 2: Basic Human Anatomy & Movement.....	191
48.1.3 Unit 3: Assisting in Physical Therapy Exercises.....	191
48.1.4 Unit 4: Patient Care and Observation.....	192
48.1.5 Unit 5: Therapy Equipment Handling Basics.....	192
48.1.6 Unit 6: Project & Viva.....	192
48.2 Assessment for 6-Month Course.....	192
48.3 Certification Outcome for 6 Months:.....	193



<b>49.0 Physiotherapy Assistant – 1 Year Program.....</b>	<b>193</b>
<b>49.1 Unit-wise Syllabus.....</b>	<b>193</b>
49.1.1 Unit 1: Introduction to Rehabilitation Sciences.....	193
49.1.2 Unit 2: Anatomy, Physiology & Biomechanics.....	194
49.1.3 Unit 3: Therapy Techniques and Exercise Programs.....	194
49.1.4 Unit 4: Physical Agents and Electrotherapy (Basic).....	194
49.1.5 Unit 5: Patient Mobility & Assistive Technology.....	194
49.1.6 Unit 6: Internship, Project & Viva.....	194
<b>49.2 Assessment for 1-Year Course.....</b>	<b>195</b>
<b>49.3 Certification Outcome for 1 Year:.....</b>	<b>195</b>
<b>50.0 Operation Theatre (OT) Assistant – 6 Months Program.....</b>	<b>195</b>
<b>50.1 Unit-wise Syllabus.....</b>	<b>196</b>
50.1.1 Unit 1: Introduction to Operation Theatre Setup.....	196
50.1.2 Unit 2: Surgical Instruments & Equipment Basics.....	196
50.1.3 Unit 3: Pre-Operation Procedures.....	196
50.1.4 Unit 4: Infection Control & Biomedical Waste Management.....	197
50.1.5 Unit 5: Post-Operation Procedures.....	197
50.1.6 Unit 6: Mini Project & Viva.....	197
<b>50.2 Assessment for 6-Month Course.....</b>	<b>197</b>
<b>50.3 Certification Outcome for 6 Months:.....</b>	<b>198</b>
<b>51.0 Operation Theatre (OT) Assistant – 1 Year Program.....</b>	<b>198</b>
<b>51.1 Unit-wise Syllabus.....</b>	<b>198</b>
51.1.1 Unit 1: Introduction to Surgery and Hospital Environment.....	198
51.1.2 Unit 2: Surgical Instruments and Handling Techniques.....	199
51.1.3 Unit 3: Aseptic Techniques and Infection Control.....	199
51.1.4 Unit 4: Anesthesia Basics and Patient Monitoring.....	199
51.1.5 Unit 5: Specialized Surgery Assisting.....	199
51.1.6 Unit 6: Clinical Internship, Project & Viva.....	200
<b>51.2 Assessment for 1-Year Course.....</b>	<b>200</b>
<b>51.3 Certification Outcome for 1 Year:.....</b>	<b>200</b>
<b>52.0 Nursing Care Assistant – 6 Months Program.....</b>	<b>201</b>
<b>52.1 Unit-wise Syllabus.....</b>	<b>201</b>
52.1.1 Unit 1: Introduction to Healthcare and Nursing Assistance.....	201
52.1.2 Unit 2: Personal Hygiene and Basic Patient Care.....	201
52.1.3 Unit 3: Feeding and Nutritional Care.....	202
52.1.4 Unit 4: Vital Signs Monitoring.....	202
52.1.5 Unit 5: Mobility Assistance and Patient Positioning.....	202
52.1.6 Unit 6: Project Work & Viva.....	202
<b>52.2 Assessment for 6-Month Course.....</b>	<b>203</b>
<b>52.3 Certification Outcome for 6 Months:.....</b>	<b>203</b>
<b>53.0 Nursing Care Assistant – 1 Year Program.....</b>	<b>203</b>
<b>53.1 Unit-wise Syllabus.....</b>	<b>204</b>
53.1.1 Unit 1: Nursing Fundamentals and Patient Rights.....	204
53.1.2 Unit 2: Basic Anatomy and Physiology.....	204



53.1.3 Unit 3: Patient Hygiene, Comfort, and Daily Care.....	204
53.1.4 Unit 4: Vital Signs, Recordkeeping, and Basic Emergency Care.....	205
53.1.5 Unit 5: Nutrition, Medication Support, and Infection Control.....	205
53.1.6 Unit 6: Clinical Internship, Project & Viva.....	205
53.2 Assessment for 1-Year Course.....	205
53.3 Certification Outcome for 1 Year:.....	206
54.0 Emergency Medical First Responder (EMFR) Assistant – 6 Months Program.....	206
54.1 Unit-wise Syllabus.....	206
54.1.1 Unit 1: Introduction to Emergency Medical Response.....	206
54.1.2 Unit 2: Patient Assessment Basics.....	207
54.1.3 Unit 3: Basic Life Support (BLS) & CPR.....	207
54.1.4 Unit 4: First Aid for Common Emergencies.....	207
54.1.5 Unit 5: Ambulance Operations & Scene Safety.....	208
54.1.6 Unit 6: Project Work & Viva.....	208
54.2 Assessment for 6-Month Course.....	208
54.3 Certification Outcome for 6 Months:.....	208
55.0 Emergency Medical First Responder (EMFR) Assistant – 1 Year Program.....	209
55.1 Unit-wise Syllabus.....	209
55.1.1 Unit 1: Emergency Medical Services (EMS) Fundamentals.....	209
55.1.2 Unit 2: Patient Assessment and Emergency Interventions.....	209
55.1.3 Unit 3: Basic Life Support (BLS) and Airway Management.....	210
55.1.4 Unit 4: Trauma Care and Injury Management.....	210
55.1.5 Unit 5: Ambulance Operations & Mass Casualty Management.....	210
55.1.6 Unit 6: Internship, Mock Drills & Viva.....	210
55.2 Assessment for 1-Year Course.....	211
55.3 Certification Outcome for 1 Year:.....	211
56.0 Dental Chairside Assistant – 6 Months Program.....	212
56.1 Unit-wise Syllabus.....	212
56.1.1 Unit 1: Introduction to Dental Healthcare.....	212
56.1.2 Unit 2: Dental Anatomy and Terminology.....	212
56.1.3 Unit 3: Chairside Assisting Techniques.....	212
56.1.4 Unit 4: Infection Control & Sterilization.....	213
56.1.5 Unit 5: Dental Materials Handling.....	213
56.1.6 Unit 6: Project Work & Viva.....	213
56.2 Assessment for 6-Month Course.....	213
56.3 Certification Outcome for 6 Months:.....	214
57.0 Dental Chairside Assistant – 1 Year Program.....	214
57.1 Unit-wise Syllabus.....	214
57.1.1 Unit 1: Dental Healthcare Delivery Systems.....	215
57.1.2 Unit 2: Detailed Dental Anatomy and Physiology.....	215
57.1.3 Unit 3: Advanced Chairside Assistance Techniques.....	215
57.1.4 Unit 4: Dental Radiology Support (Intro).....	215
57.1.5 Unit 5: Specialized Assistance Areas.....	216
57.1.6 Unit 6: Clinical Internship, Project & Viva.....	216

57.2 Assessment for 1-Year Course.....	216
57.3 Certification Outcome for 1 Year:.....	216
58.0 Vision Technician Assistant – 6 Months Program.....	217
58.1 Unit-wise Syllabus.....	217
58.1.1 Unit 1: Introduction to Eye Care and Vision Screening.....	217
58.1.2 Unit 2: Basic Anatomy and Physiology of the Eye.....	218
58.1.3 Unit 3: Vision Screening Techniques.....	218
58.1.4 Unit 4: Basic Optical Dispensing Assistance.....	218
58.1.5 Unit 5: Infection Control & Equipment Maintenance.....	218
58.1.6 Unit 6: Mini Project & Viva.....	219
58.2 Assessment for 6-Month Course.....	219
58.3 Certification Outcome for 6 Months:.....	219
59.0 Vision Technician Assistant – 1 Year Program.....	220
59.1 Unit-wise Syllabus.....	220
59.1.1 Unit 1: Introduction to Optometry and Eye Healthcare.....	220
59.1.2 Unit 2: Detailed Anatomy and Physiology of Vision.....	220
59.1.3 Unit 3: Vision Assessment Methods.....	221
59.1.4 Unit 4: Optical Dispensing and Fitting.....	221
59.1.5 Unit 5: Basic Assistance in Eye Procedures.....	221
59.1.6 Unit 6: Internship, Project Work & Viva.....	221
59.2 Assessment for 1-Year Course.....	222
59.3 Certification Outcome for 1 Year:.....	222
60.0 Dialysis Technician Assistant – 6 Months Program.....	223
60.1 Unit-wise Syllabus.....	223
60.1.1 Unit 1: Introduction to Dialysis and Kidney Function.....	223
60.1.2 Unit 2: Types of Dialysis and Overview.....	223
60.1.3 Unit 3: Preparation for Dialysis Session.....	223
60.1.4 Unit 4: Patient Monitoring During Dialysis.....	224
60.1.5 Unit 5: Infection Control & Equipment Cleaning.....	224
60.1.6 Unit 6: Project Work & Viva.....	224
60.2 Assessment for 6-Month Course.....	224
60.3 Certification Outcome for 6 Months:.....	225
61.0 Dialysis Technician Assistant – 1 Year Program.....	225
61.1 Unit-wise Syllabus.....	225
61.1.1 Unit 1: Kidney Anatomy, Physiology, and Diseases.....	226
61.1.2 Unit 2: Principles and Techniques of Dialysis.....	226
61.1.3 Unit 3: Vascular Access Care.....	226
61.1.4 Unit 4: Dialysis Machine Handling and Patient Monitoring.....	226
61.1.5 Unit 5: Emergency Management and Infection Control.....	227
61.1.6 Unit 6: Clinical Internship, Project & Viva.....	227
61.2 Assessment for 1-Year Course.....	227
61.3 Certification Outcome for 1 Year:.....	227
62.0 Yoga Wellness Assistant – 6 Months Program.....	228
62.1 Unit-wise Syllabus.....	228

62.1.1 Unit 1: Fundamentals of Yoga and Wellness.....	228
62.1.2 Unit 2: Yoga Asanas (Basic Postures).....	229
62.1.3 Unit 3: Pranayama (Breathing Techniques).....	229
62.1.4 Unit 4: Relaxation & Meditation Techniques.....	229
62.1.5 Unit 5: Introduction to Yogic Diet and Lifestyle.....	229
62.1.6 Unit 6: Project Work & Viva.....	229
62.2 Assessment for 6-Month Course.....	230
62.3 Certification Outcome for 6 Months:.....	230
63.0 Yoga Wellness Assistant – 1 Year Program.....	230
63.1 Unit-wise Syllabus.....	231
63.1.1 Unit 1: Philosophy of Yoga & Wellness Science.....	231
63.1.2 Unit 2: Asanas – Intermediate Level Practice.....	231
63.1.3 Unit 3: Advanced Breathing & Pranayama Techniques.....	231
63.1.4 Unit 4: Meditation and Yogic Psychology.....	231
63.1.5 Unit 5: Yoga Teaching Practice and Wellness Management.....	232
63.1.6 Unit 6: Internship, Project, and Viva.....	232
63.2 Assessment for 1-Year Course.....	232
63.3 Certification Outcome for 1 Year:.....	232
64.0 Jyotish (Astrology) Basics – 6 Months Program.....	233
64.1 Unit-wise Syllabus.....	233
64.1.1 Unit 1: Introduction to Jyotish Shastra.....	233
64.1.2 Unit 2: Basic Astronomical Concepts.....	233
64.1.3 Unit 3: Houses and Bhavas.....	234
64.1.4 Unit 4: Basics of Chart Preparation.....	234
64.1.5 Unit 5: Planetary Effects and Strengths.....	234
64.1.6 Unit 6: Mini Project & Viva.....	234
64.2 Assessment for 6-Month Course.....	234
64.3 Certification Outcome for 6 Months:.....	235
65.0 Jyotish (Astrology) Basics – 1 Year Program.....	235
65.1 Unit-wise Syllabus.....	235
65.1.1 Unit 1: Deeper Study of Zodiac Signs and Planets.....	235
65.1.2 Unit 2: Bhavas and Life Aspects.....	236
65.1.3 Unit 3: Chart Preparation, Divisional Charts (Intro).....	236
65.1.4 Unit 4: Dasha Systems and Timing of Events.....	236
65.1.5 Unit 5: Transit Analysis (Gochar) and Remedies (Shanti).....	236
65.1.6 Unit 6: Internship / Project & Viva.....	236
65.2 Assessment for 1-Year Course.....	237
65.3 Certification Outcome for 1 Year:.....	237
66.0 Vastu Shastra Assistant – 6 Months Program.....	237
66.1 Unit-wise Syllabus.....	238
66.1.1 Unit 1: Introduction to Vastu Shastra.....	238
66.1.2 Unit 2: Directional Analysis in Vastu.....	238
66.1.3 Unit 3: Vastu for Residential Buildings.....	238
66.1.4 Unit 4: Energy Balancing and Vastu Corrections.....	238



66.1.5 Unit 5: Preparation of Basic Vastu Plans.....	239
66.1.6 Unit 6: Project Work and Viva.....	239
66.2 Assessment for 6-Month Course.....	239
66.3 Certification Outcome for 6 Months:.....	239
67.0 Vastu Shastra Assistant – 1 Year Program.....	240
67.1 Unit-wise Syllabus.....	240
67.1.1 Unit 1: Advanced Directional Sciences.....	240
67.1.2 Unit 2: Vastu for Different Properties.....	240
67.1.3 Unit 3: Detailed Vastu Dosha Analysis & Remedies.....	240
67.1.4 Unit 4: Map Reading, Layout Preparation & Reporting.....	241
67.1.5 Unit 5: Introduction to Modern Vastu Trends.....	241
67.1.6 Unit 6: Internship, Final Project, and Viva.....	241
67.2 Assessment for 1-Year Course.....	241
67.3 Certification Outcome for 1 Year:.....	242
68.0 Ayurveda Lifestyle Assistant – 6 Months Program.....	242
68.1 Unit-wise Syllabus.....	242
68.1.1 Unit 1: Introduction to Ayurveda and Life Science.....	243
68.1.2 Unit 2: Ayurvedic Daily Routine (Dinacharya).....	243
68.1.3 Unit 3: Basics of Ayurvedic Diet (Ahara).....	243
68.1.4 Unit 4: Ayurvedic Lifestyle Therapies.....	243
68.1.5 Unit 5: Introduction to Herbal Home Remedies.....	243
68.1.6 Unit 6: Project Work & Viva.....	244
68.2 Assessment for 6-Month Course.....	244
68.3 Certification Outcome for 6 Months:.....	244
69.0 Ayurveda Lifestyle Assistant – 1 Year Program.....	245
69.1 Unit-wise Syllabus.....	245
69.1.1 Unit 1: Fundamentals of Ayurveda and Preventive Health.....	245
69.1.2 Unit 2: Ayurveda Anatomy and Physiology (Basic).....	245
69.1.3 Unit 3: Dinacharya, Ritucharya, and Sadvrutta (Code of Conduct).....	245
69.1.4 Unit 4: Ayurvedic Nutrition and Herbal Science.....	246
69.1.5 Unit 5: Basic Panchakarma and Rejuvenation Therapy (Intro).....	246
69.1.6 Unit 6: Internship, Wellness Program Project & Viva.....	246
69.2 Assessment for 1-Year Course.....	246
69.3 Certification Outcome for 1 Year:.....	247
70.0 Fire & Safety Assistant – 6 Months Program.....	247
70.1 Unit-wise Syllabus.....	248
70.1.1 Unit 1: Introduction to Fire Safety.....	248
70.1.2 Unit 2: Types of Fires and Fire Extinguishers.....	248
70.1.3 Unit 3: Evacuation Procedures and Safety Drills.....	248
70.1.4 Unit 4: Fire Detection and Alarm Systems.....	248
70.1.5 Unit 5: First Aid for Fire Incidents.....	249
70.1.6 Unit 6: Mini Project and Safety Drill Demonstration.....	249
70.2 Assessment for 6-Month Course.....	249
70.3 Certification Outcome for 6 Months:.....	249



<b>71.0 Fire &amp; Safety Assistant – 1 Year Program.....</b>	<b>250</b>
<b>71.1 Unit-wise Syllabus.....</b>	<b>250</b>
71.1.1 Unit 1: Advanced Fire Science and Combustion Principles.....	250
71.1.2 Unit 2: Fire Extinguishing Techniques and Equipment Handling.....	250
71.1.3 Unit 3: Industrial and Building Fire Safety.....	250
71.1.4 Unit 4: Disaster Management and Emergency Response Planning.....	251
71.1.5 Unit 5: First Aid and Basic Life Support (BLS).....	251
71.1.6 Unit 6: Field Internship, Safety Audit Project, and Viva.....	251
71.2 Assessment for 1-Year Course.....	251
71.3 Certification Outcome for 1 Year:.....	252
<b>72.0 Industrial Fire Safety Technician – 6 Months Program.....</b>	<b>252</b>
<b>72.1 Unit-wise Syllabus.....</b>	<b>252</b>
72.1.1 Unit 1: Fundamentals of Industrial Fire Safety.....	252
72.1.2 Unit 2: Fire Detection and Alarm Systems.....	252
72.1.3 Unit 3: Types of Fire and Fire Extinguishing Agents.....	253
72.1.4 Unit 4: Fire Fighting Equipment and Water Systems.....	253
72.1.5 Unit 5: Emergency Procedures and Evacuation Plans.....	253
72.1.6 Unit 6: Project Work & Viva.....	253
72.2 Assessment for 6-Month Course.....	253
72.3 Certification Outcome for 6 Months:.....	254
<b>73.0 Industrial Fire Safety Technician – 1 Year Program.....</b>	<b>254</b>
<b>73.1 Unit-wise Syllabus.....</b>	<b>254</b>
73.1.1 Unit 1: Advanced Fire Science and Behavior in Industries.....	255
73.1.2 Unit 2: Fire Protection Equipment and Systems.....	255
73.1.3 Unit 3: Fire Risk Assessment and Safety Standards.....	255
73.1.4 Unit 4: Incident Management and Emergency Response.....	255
73.1.5 Unit 5: Specialized Fire Hazards in Industries.....	255
73.1.6 Unit 6: Internship, Field Project & Viva.....	256
73.2 Assessment for 1-Year Course.....	256
73.3 Certification Outcome for 1 Year:.....	256
<b>74.0 Hospital Safety Assistant – 6 Months Program.....</b>	<b>257</b>
<b>74.1 Unit-wise Syllabus.....</b>	<b>257</b>
74.1.1 Unit 1: Introduction to Hospital Safety and Patient Rights.....	257
74.1.2 Unit 2: Fire Safety and Emergency Evacuation in Hospitals.....	257
74.1.3 Unit 3: Infection Control and Hygiene Practices.....	257
74.1.4 Unit 4: Basic Life Support and First Aid.....	258
74.1.5 Unit 5: Workplace Safety and Hazard Management.....	258
74.1.6 Unit 6: Project Work and Viva.....	258
74.2 Assessment for 6-Month Course.....	258
74.3 Certification Outcome for 6 Months:.....	258
<b>75.0 Hospital Safety Assistant – 1 Year Program.....</b>	<b>259</b>
<b>75.1 Unit-wise Syllabus.....</b>	<b>259</b>
75.1.1 Unit 1: Hospital Safety Policies and Legal Requirements.....	259
75.1.2 Unit 2: Fire and Hazardous Material Safety in Healthcare.....	259

75.1.3 Unit 3: Advanced Infection Control and PPE Protocols.....	260
75.1.4 Unit 4: Patient Handling and Emergency Transport.....	260
75.1.5 Unit 5: Occupational Health & Safety for Healthcare Workers.....	260
75.1.6 Unit 6: Internship, Project Work and Final Assessment.....	260
75.2 Assessment for 1-Year Course.....	260
75.3 Certification Outcome for 1 Year:.....	261
76.0 Construction Site Fire & Safety Supervisor – 6 Months Program.....	261
76.1 Unit-wise Syllabus.....	262
76.1.1 Unit 1: Introduction to Construction Site Safety.....	262
76.1.2 Unit 2: Basics of Fire Science and Site Fire Hazards.....	262
76.1.3 Unit 3: Fire Prevention and Control Measures.....	262
76.1.4 Unit 4: Personal Protective Equipment (PPE) and Site Safety Tools.....	262
76.1.5 Unit 5: Emergency Response and Evacuation at Construction Sites....	263
76.1.6 Unit 6: Mini Project and Safety Drill.....	263
76.2 Assessment for 6-Month Course.....	263
76.3 Certification Outcome for 6 Months:.....	263
77.0 Construction Site Fire & Safety Supervisor – 1 Year Program.....	264
77.1 Unit-wise Syllabus.....	264
77.1.1 Unit 1: Construction Safety Management System.....	264
77.1.2 Unit 2: Advanced Fire Science and Hazard Control.....	264
77.1.3 Unit 3: Fire Protection Systems and Equipment Installation.....	264
77.1.4 Unit 4: Accident Investigation and Reporting.....	265
77.1.5 Unit 5: Emergency Preparedness and Disaster Planning.....	265
77.1.6 Unit 6: Field Internship, Safety Audit Project & Viva.....	265
77.2 Assessment for 1-Year Course.....	265
77.3 Certification Outcome for 1 Year:.....	266
78.0 Disaster Management & Emergency Response Assistant – 6 Months Program.	266
78.1 Unit-wise Syllabus.....	266
78.1.1 Unit 1: Introduction to Disaster Management.....	266
78.1.2 Unit 2: Types of Disasters and Risk Awareness.....	267
78.1.3 Unit 3: Emergency Response Principles.....	267
78.1.4 Unit 4: Basic First Aid and CPR Training.....	267
78.1.5 Unit 5: Communication and Coordination during Disasters.....	267
78.1.6 Unit 6: Mini Project and Drill Simulation.....	267
78.2 Assessment for 6-Month Course.....	268
78.3 Certification Outcome for 6 Months:.....	268
79.0 Disaster Management & Emergency Response Assistant – 1 Year Program.....	268
79.1 Unit-wise Syllabus.....	268
79.1.1 Unit 1: Advanced Concepts in Disaster Management.....	269
79.1.2 Unit 2: Disaster Risk Analysis and Vulnerability Mapping.....	269
79.1.3 Unit 3: Emergency Response Strategies.....	269
79.1.4 Unit 4: Incident Management System and ERT Activation.....	269
79.1.5 Unit 5: Communication, Psychosocial Care, and Public Awareness.....	269
79.1.6 Unit 6: Field Internship, Project Work and Viva.....	270

<b>79.2 Assessment for 1-Year Course.....</b>	<b>270</b>
<b>79.3 Certification Outcome for 1 Year:.....</b>	<b>270</b>

## **1.0 VSOS Vocational Short-Term Courses Catalog (6 Months / 1 Year)**

### **1.1 Eligibility Criteria – Vocational Skill Open Schooling (VSOS) Board**

1. **Minimum Age:** 14 years (unless specified otherwise for certain trades)
2. **Educational Qualification:**
  1. For Level 1 Certificate Courses: Open to learners who have completed or are appearing for Class 8 or above
  2. For Level 2 & 3 Courses: Must have passed Class 10 or equivalent
  3. Prior work experience or skill knowledge may be considered for lateral entry.
3. **Admission Flexibility:**
  1. Open Entry System available
  2. Recognition of Prior Learning (RPL) applicable

#### 4. Documents Required:

1. Educational qualifications (if available)

2. Age and identity proof

3. Skill certificate (if applicable)

4. Photograph

## 1.2 Engineering & Technical

Course Name	Duration	Suggested NCRF Level
Electrical Wiring & Safety	6 months	Level 3
Basic Electronics & PCB Design	6 months	Level 3
Automobile Servicing	1 year	Level 4
AC & Refrigeration Technician	1 year	Level 4.5
CNC Programming & Tool Operation	6 months	Level 4
Welding & Fabrication Techniques	1 year	Level 4.5

## 1.3 Commerce & Office Skills

Course Name	Duration	Suggested NCRF Level
Office Secretaryship	1 year	Level 4
Basic Accounting & Tax Procedures	6 months	Level 3
Tally ERP & GST Filing	6 months	Level 3.5
Banking & Microfinance Basics	1 year	Level 4.5
Computerized Office Management	6 months	Level 4



## 1.4 Hospitality & Service

Course Name	Duration	Suggested NCRF Level
Commercial Cooking	6 months	Level 3
Front Office Assistance	6 months	Level 3.5
Housekeeping Operations	1 year	Level 4
Bakery & Confectionery	6 months	Level 3.5

## 1.5 Information Technology

Course Name	Duration	Suggested NCRF Level
Web Designing	6 months	Level 3.5
Data Entry & Processing	6 months	Level 3
Hardware & Networking Basics	1 year	Level 4
Python/Java Programming	6 months	Level 4
Multimedia & Animation	1 year	Level 4.5
AI & ML Foundation Course	6 months	Level 4.5

## 1.6 Agriculture & Allied

Course Name	Duration	Suggested NCRF Level
Dairy Technician	6 months	Level 3.5
Poultry Farm Assistant	6 months	Level 3
Basic Horticulture	1 year	Level 4
Sericulture Worker	6 months	Level 3.5

## 1.7 Health & Paramedical

Course Name	Duration	Suggested NCRF Level
Medical Lab Assistant	1 year	Level 4.5
Health Care Worker	6 months	Level 3.5
Yoga & Wellness Trainer	6 months	Level 3.5
Physiotherapy Assistant	1 year	Level 4.5

## 1.8 Design, Art, & Media

Course Name	Duration	Suggested NCRF Level
Fashion Design Basics	1 year	Level 4
Interior Decoration	6 months	Level 3.5
Printing & Publishing Skills	6 months	Level 3
Graphic Design	1 year	Level 4.5

## 1.9 Other Trades

Course Name	Duration	Suggested NCRF Level
Plumbing Technician	6 months	Level 3.5
Carpentry & Woodwork Basics	6 months	Level 3
Beauty & Personal Care	1 year	Level 4
Solar Installation & Repair	6 months	Level 4
Renewable Energy Systems	1 year	Level 4.5

## 1.10 VSOS Vocational Paramedical Courses

### 1. Medical Lab Assistant

**Duration:** 1 Year | **NCRF Level:** 4.5

**Focus:** Blood sample collection, urine/stool testing, lab reporting

**Career:** Lab Assistant, Diagnostic Support Staff

### 2. Pharmacy Assistant

**Duration:** 1 Year | **NCRF Level:** 4.5

**Focus:** Drug classification, inventory handling, prescription support

**Career:** Retail Pharmacy Assistant, Clinic Dispensary Assistant

### 3. Radiology & Imaging Assistant

**Duration:** 1 Year | **NCRF Level:** 5

**Focus:** X-ray machine handling, patient prep, image processing (basic)

**Career:** X-ray Technician Assistant, Imaging Lab Support

### 4. Physiotherapy Assistant

**Duration:** 1 Year | **NCRF Level:** 4.5

**Focus:** Assist therapists in exercises, equipment use, elderly care

**Career:** Clinic Support, Home Therapy Assistant

### 5. Operation Theatre (OT) Assistant

**Duration:** 1 Year | **NCRF Level:** 4.5

**Focus:** Sterilization, surgical instruments, assisting in OT

**Career:** OT Helper in Hospitals, Surgical Clinics

### 6. Nursing Care Assistant

**Duration:** 1 Year | **NCRF Level:** 4.5

**Focus:** Patient hygiene, feeding, vital signs, basic care

**Career:** Hospital Attendant, Home Nursing Aide

## 7. Emergency Medical First Responder (EMFR)

**Duration:** 6 Months | **NCRF Level:** 3.5

**Focus:** CPR, first aid, ambulance handling basics

**Career:** Ambulance Assistant, Disaster Relief Health Worker

## 8. Dental Chairside Assistant

**Duration:** 6 Months | **NCRF Level:** 3.5

**Focus:** Sterilization, dental tools, assisting dentist

**Career:** Dental Clinic Helper, Reception + Chairside Role

## 9. Vision Technician (Optical Assistant)

**Duration:** 1 Year | **NCRF Level:** 4.5

**Focus:** Eye testing, lens fitting, frame selection

**Career:** Optical Shop Assistant, Eye Camp Worker

## 10. Dialysis Technician Assistant

**Duration:** 1 Year | **NCRF Level:** 5

**Focus:** Dialysis machine prep, patient care during dialysis

**Career:** Dialysis Center Technician (Assistant Role)

## 1.11 IKS-Based Vocational Courses for VSOS

### 1. IKS - Yoga Wellness Assistant

**NCRF Level:** 3.5

- ✓ Yoga fundamentals + Therapy basics
- ✓ Simple asanas, pranayama, meditation, yoga class assisting
- ✓ Practical training + yoga therapy awareness

**Career:** Yoga Instructor Assistant | Personal Yoga Coach | Wellness Facilitator



## 2. IKS - Jyotish (Astrology) Basics

**NCRF Level:** 3.5

- ✓ Introduction to Indian Astrology
- ✓ Birth Chart (Kundali) Preparation (Manual & Software)
- ✓ Basics of Nakshatra, Rashi, Houses, and Planets
- ✓ Ethical Consultation Practices

**Career:** Astrology Assistant | Horoscope Analyst | Jyotish Consultant Trainee

## 3. IKS - Vastu Shastra Assistant

**NCRF Level:** 3.5

- ✓ Principles of Vastu for Home, Office, and Plots
- ✓ Directions, Elements (Panchabhoota), Energy Flows
- ✓ Basic Plan Correction Techniques
- ✓ Preparing Vastu Reports for Clients (intro level)

**Career:** Vastu Consultant Assistant | Real Estate Vastu Advisor Trainee

## 4. IKS - Ayurveda Lifestyle Assistant

**NCRF Level:** 3.5

- ✓ Basic Concepts: Tridosha, Dhatus, Srotas
- ✓ Ayurvedic Daily Routine (Dinacharya), Ritucharya
- ✓ Herbal Remedies, Diet & Nutrition Guidelines
- ✓ Basic First Aid using Ayurveda

**Career:** Ayurveda Wellness Guide | Clinic Assistant | Health & Nutrition Advisor Trainee

## 1.12 VSOS Vocational Courses – Fire and Safety

# 1. Fire & Safety Assistant

**Duration:** 6 Months

**NCRF Level:** 3.5

**Focus:**

- Basics of fire, types of fires
- Use of fire extinguishers (practical)
- Evacuation drills, workplace safety awareness

**Career Path:**

- Fire Safety Helper
- Safety Guard (Entry Level)
- Evacuation Drill Assistant

# 2. Industrial Fire Safety Technician

**Duration:** 1 Year

**NCRF Level:** 4.5

**Focus:**

- Industrial fire risks and safety audits
- Fire alarm systems and hydrants
- Risk assessment, emergency planning

**Career Path:**

- Safety Officer Assistant (Industries, Warehouses)

- Risk Assessment Field Worker
- Industrial Fire Response Staff

### 3. Hospital Safety Assistant

**Duration:** 6 Months

**NCRF Level:** 3.5

**Focus:**

- Patient evacuation in emergencies
- Hospital fire safety standards
- Handling oxygen-related fires

**Career Path:**

- Hospital Fire & Safety Support Staff
- Ambulance and ER Safety Assistant

### 4. Construction Site Fire & Safety Supervisor

**Duration:** 1 Year

**NCRF Level:** 5

**Focus:**

- High-rise construction fire safety norms
- Scaffold safety, excavation rescue planning
- Electrical hazard safety in construction

**Career Path:**

- Safety Supervisor on Construction Sites
- Fire Risk Assessment Officer (Construction Projects)

## 5. Disaster Management & Emergency Response Assistant

**Duration:** 1 Year

**NCRF Level:** 4.5

**Focus:**

- Handling flood, earthquake, chemical spill emergencies
- Basic life support (BLS), CPR training
- Working with disaster response teams

**Career Path:**

- Disaster Response Volunteer Coordinator
- NGO/CSR Project Safety Field Staff

# Engineering & Technical

## 2.0 Electrical Wiring & Safety

**Duration:** 6 Months

**NCRF Level:** 3

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits (30 hours per credit)

**Mode:** Blended (Theory + Practical)

**Outcome:** Job-ready electrician for domestic and commercial wiring

## 2.1 Unit-Wise Curriculum Breakdown



### **2.1.1 Unit 1: Basics of Electricity & Electrical Tools**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Introduction to Electric Current, Voltage, Resistance, Power
2. Ohm's Law and Simple Circuits
3. Electrical Units and Measuring Instruments
4. Identification and Use of Hand Tools
5. Safety Guidelines for Using Tools

**Practical:**

1. Using voltmeter, ammeter, multimeter
2. Tool demonstration and maintenance
3. Simple series and parallel circuits

### **2.1.2 Unit 2: Wiring Materials & Wiring Systems**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Conductors, Insulators, Cable Types
2. PVC, Batten, Casing-Capping, Conduit Systems
3. Switches, Plugs, Sockets, MCBs, DBs
4. Wiring Symbols and Color Codes

**Practical:**

1. Prepare sample wiring boards
2. Strip and connect wires using different systems
3. Fix switches, sockets, junction boxes

### **2.1.3 Unit 3: Domestic Wiring Installation**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. Layout Planning: Rooms, Kitchens, Bathrooms
2. Single-phase Distribution System
3. Earthing Systems and Neutral Connections
4. Load Calculation & Circuit Design

**Practical:**

1. Execute a sample room wiring project
2. Connect meter board to DB and load
3. Perform Megger Test

### **2.1.4 Unit 4: Electrical Safety, Codes & Standards**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Electrical Hazards & Causes of Accidents
2. First Aid in Electrical Accidents
3. Indian Electricity Rules & BIS Codes
4. Personal Protective Equipment (PPE)
5. Fire Extinguishing Techniques

**Practical:**

1. Fire Drill and Emergency Response Demo
2. First Aid application simulation
3. Safety gear usage demo

### **2.1.5 Unit 5: Testing, Maintenance & Troubleshooting**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Continuity & Insulation Tests
2. Common Faults: Short Circuit, Overload
3. Troubleshooting Techniques
4. Energy Saving Tips
5. Maintenance Log Preparation

**Practical:**

1. Detect and repair faults on a demo board
2. Simulate overload and replace fuses/MCBs
3. Create a maintenance checklist

### **2.1.6 Unit 6: Project & Viva**

**Duration:** 20 Hours

1. Hands-on mini project (e.g., wiring for a small room or a switchboard)
2. Internal Viva and Report Submission
3. Portfolio of practical work

## **2.2 Assessment**

1. **Theory Exam** – 30%
2. **Practical Tasks & Logs** – 40%
3. **Project & Viva** – 30%

## 2.3 Certification Outcome

Upon successful completion, learners will be certified as:

**“Certified Electrical Wiring Assistant (Level 3)”** – Eligible for domestic wiring jobs or apprentice with a licensed electrician.

## 3.0 Basic Electronics & PCB Design

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits (30 hours = 1 credit)

**Delivery Mode:** Blended (Theory + Practical)

**Outcome:** Skill-ready for electronics assembly, circuit testing, and PCB design using EDA tools



## 3.1 Unit-Wise Syllabus Breakdown

### 3.1.1 Unit 1: Fundamentals of Electronics

**Duration:** 30 Hours (Theory: 18 | Practical: 12)

1. Concepts of Voltage, Current, Resistance, and Power
2. Ohm's Law and Kirchhoff's Laws
3. Series and Parallel Circuits
4. Passive Components: Resistors, Capacitors, Inductors
5. Measuring Instruments: Multimeter, LCR meter

**Practical:**

1. Assemble and measure simple RC, RL, and RLC circuits
2. Use multimeter to measure resistance, voltage, current
3. Simulation of circuits using software (e.g., Tinkercad or Proteus)

### 3.1.2 Unit 2: Active Devices & Circuit Basics

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Diodes: Rectifiers, Zener, LEDs
2. Transistors: NPN/PNP – working and applications
3. Introduction to ICs (Op-amps, Timers)
4. Power Supply Basics: Linear and SMPS

5. Logic Gates: AND, OR, NOT, NAND, NOR

**Practical:**

1. Build basic rectifier circuits (Half/Full Wave)
2. Bias and test a transistor circuit
3. Logic gate circuits using ICs

### **3.1.3 Unit 3: Introduction to PCB Design**

**Duration:** 30 Hours (Theory: 12 | Practical: 18)

1. What is a PCB? Types and Materials
2. Schematic to PCB process
3. Introduction to EDA tools: EasyEDA / KiCad / Proteus
4. Layout design rules: Traces, Pads, Vias, Silkscreen
5. Single-sided and double-sided board considerations

**Practical:**

1. Create a schematic diagram using software
2. Design a PCB layout for a simple circuit
3. Simulate circuit operation in the software

### **3.1.4 Unit 4: PCB Fabrication Techniques**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Artwork printing and transparency
2. Etching process (manual or lab-based)
3. Drilling, Tinning, and Solder Masking

4. Component placement and soldering
5. PCB finishing and inspection

**Practical:**

1. Prepare a single-sided PCB using toner transfer/UV method
2. Drill and solder components on fabricated PCB
3. Test and troubleshoot final assembled circuit

### **3.1.5 Unit 5: Safety, Quality Control & Standards**

**Duration:** 30 Hours (Theory: 18 | Practical: 12)

1. ESD (Electrostatic Discharge) and Antistatic Measures
2. Safe Soldering Practices
3. Fault diagnosis and repair of circuits
4. ISO/IPC standards for PCB
5. Industry best practices

**Practical:**

1. Demonstrate ESD-safe setup
2. Repair a faulted PCB with dry joints or bridge
3. Test working PCB against specifications

### **3.1.6 Unit 6: Project, Portfolio & Viva**

**Duration:** 30 Hours

1. Mini Project: Design, fabricate, and test a circuit (e.g., LED blinker, IR sensor switch, power supply)
2. Project documentation & demonstration

3. Viva & feedback
4. Submission of design file, layout printout, and test report

### 3.2 Assessment Pattern

1. **Theory Exam** – 30%
2. **Practical Tasks & Logs** – 40%
3. **Project & Viva** – 30%

### 3.3 Certification Outcome

Graduates will be awarded:

**“Certified Electronics Assembly & PCB Design Technician (Level 3.5)”**

Eligible for roles like:

1. Electronics Assembler
2. PCB Designer (Junior)
3. Maintenance Assistant
4. R&D Lab Intern

## 4.0 AC & Refrigeration Technician

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical + Field Training)

**Outcome:** Skill-ready for domestic and commercial AC/refrigeration servicing roles



## 4.1 Unit-Wise Syllabus Structure

### Semester 1: Basics of Refrigeration, Components & Systems

#### 4.1.1 Unit 1: Principles of Refrigeration

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Heat transfer: Conduction, Convection, Radiation
2. Laws of Thermodynamics
3. Vapour Compression Cycle (VCC)
4. Sub-cooling, Superheating, COP
5. Common refrigerants and their properties

**Practical:**

1. Model-based demonstration of VCC
2. Pressure-temperature measurement using gauges

#### 4.1.2 Unit 2: Refrigeration System Components

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Compressors: Types, working, oil levels
2. Condensers: Air-cooled & Water-cooled

3. Evaporators and Expansion Valves
4. Filters, Accumulators, Driers

**Practical:**

1. Component identification and assembly
2. Leak testing and vacuum creation in system

### **4.1.3 Unit 3: Electrical & Control Systems in Refrigeration**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. Motors, Relays, Contactors, Overload Protection
2. Thermostats, Sensors, Control Panels
3. Wiring diagrams and color codes
4. Starter circuits and capacitor selection

**Practical:**

1. Panel wiring of split AC
2. Testing electrical continuity and connections

### **Semester 2: Air Conditioning, Installation & Servicing**

#### **4.1.4 Unit 4: Air Conditioning Systems**

**Duration:** 60 Hours (Theory: 25 | Practical: 35)

1. Psychrometry and air properties
2. Window, Split, and Central AC Systems
3. Inverter AC and VRF/VRV Concepts
4. AHU and Ductable AC Basics

**Practical:**

1. Installation of split AC unit
2. Refrigerant charging and performance testing
3. Filter cleaning, blower servicing

#### **4.1.5 Unit 5: Troubleshooting & Repairs**

**Duration:** 50 Hours (Theory: 15 | Practical: 35)

1. Fault Diagnosis (Low cooling, No cooling, Noisy operation)
2. Gas Leak Detection and Repair
3. Compressor Testing & Replacement
4. Servicing Schedule and AMC practices

**Practical:**

1. Simulated fault finding
2. Vacuum pumping and gas recharging
3. Condenser and evaporator cleaning

#### **4.1.6 Unit 6: Safety, Regulations & Green Practices**

**Duration:** 40 Hours (Theory: 30 | Practical: 10)

1. Handling refrigerants safely (R-22, R-134a, R-410a)
2. Ozone-friendly practices, Montreal Protocol
3. Electrical safety, PPE, fire safety
4. Waste handling and disposal norms

**Practical:**

1. Safety demonstration with PPE
2. Fire drill and emergency protocol

#### **4.1.7 Unit 7: Project, Field Training & Viva**

**Duration:** 40 Hours

1. Field Visit to HVAC workshop/commercial site
2. Project: Complete installation and service logbook
3. Submission of Job Diary
4. Viva and Final Practical Evaluation

### **4.2 Assessment Format**

Component	Weightage
Theory Examination	25%
Practical & Workshop Task	40%
Project & Viva	35%

### **4.3 Certification Outcome**



**“Certified AC & Refrigeration Technician (Level 4.5)”**

Opportunities:

1. AC Technician (Domestic/Commercial)
2. Refrigeration Mechanic
3. Apprentice under HVAC companies
4. Suitable for Startup AMC services



## **5.0 CNC Programming & Tool Operation**

**Duration:** 6 Months

**NCRF Level:** 4

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Hands-on Lab + Simulation)

**Outcome:** Job-ready technician for CNC operation and basic part programming in turning/milling

## 5.1 Unit-Wise Syllabus Structure

### 5.1 Unit 1: Basics of Manufacturing & Machining

**Duration:** 25 Hours (Theory: 15 | Practical: 10)

1. Introduction to Manufacturing Processes
2. Conventional vs CNC Machines
3. Materials Used in Machining
4. Basic Measuring Instruments (Vernier, Micrometer, Dial Gauge)
5. Importance of Precision & Tolerances

**Practical:**

1. Basic measurements of components
2. Machine safety protocols and workshop practices

### 5.1.2 Unit 2: CNC Machines – Types & Components

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. CNC Lathe and CNC Milling: Construction and Function
2. Machine Axes and Coordinates (G17, G18, G19)
3. CNC Tooling: Types, Holders, and Mounting
4. Work Holding Devices: Chucks, Vises, Fixtures
5. Lubrication and Coolant Systems

**Practical:**

1. CNC machine part identification
2. Tool setting and zero referencing

### **5.1.3 Unit 3: CNC Programming Fundamentals**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. Understanding G-codes and M-codes
2. Linear (G01), Rapid (G00), Circular Interpolation (G02/G03)
3. Program Structure: N, G, X, Y, Z, F, S, T, M
4. Canned Cycles: Drilling, Peck Drilling, Tapping
5. Simple CNC Lathe and Milling Programs

**Practical:**

1. Writing and simulating basic turning/milling programs
2. Dry-run and graphical simulation

### **5.1.4 Unit 4: CNC Machine Operation**

**Duration:** 40 Hours (Theory: 10 | Practical: 30)

1. Program Entry and Editing on CNC Console
2. Tool Offset and Work Offset (G54–G59)
3. Tool Path Verification and Simulation
4. Machine Run and Component Production
5. Surface Finish and Quality Check

**Practical:**

1. Operate CNC turning and milling machines
2. Produce real components and inspect dimensions

### **5.1.5 Unit 5: Maintenance, Safety & Troubleshooting**

**Duration:** 25 Hours (Theory: 15 | Practical: 10)

1. Preventive Maintenance Procedures
2. Common CNC Machine Faults and Errors
3. Importance of Backup and File Transfer
4. Electrical and Mechanical Safety
5. CNC Operation Checklist

**Practical:**

1. Maintenance tasks (coolant refilling, cleaning filters)
2. Resetting alarms and tool re-calibration

### **5.1.6 Unit 6: Project, Review & Viva**



**Duration:** 20 Hours

Mini Project: Programming and machining of a precision component

Presentation of tool paths, process sheet, and quality report

Viva and evaluation based on CNC operation skillset

## 5.2 Assessment Criteria

Component	Weightage
Theory Examination	25%
Practical Evaluation	45%
Final Project & Viva	30%

## 5.3 Certification Outcome

**“Certified CNC Programming & Tool Operation Technician (Level 4)”**

Eligible for:

- CNC Machine Operator – Lathe/Mill
- Junior CNC Programmer
- Tool Room Assistant
- Machining Apprentice in Manufacturing Units

## 6.0 Welding & Fabrication Techniques

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical + Workshop Simulation)

**Outcome:** Competency in various welding processes and structural fabrication jobs

### 6.1 Unit-Wise Curriculum Structure

#### Semester 1: Fundamentals of Welding & Practice

##### 6.1.1 Unit 1: Introduction to Welding & Workshop Safety

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. History and Importance of Welding
2. Types of Welding Processes: Arc, MIG, TIG, Gas, Spot
3. Welding Tools & Equipment
4. Personal Protective Equipment (PPE) and Safety
5. Hazards: Fumes, UV, Electrical Risks

#### **Practical:**

1. Demonstration of arc ignition and shutdown
2. PPE demo and safety checklist exercises

### **6.1.2 Unit 2: Arc Welding (SMAW)**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Working Principle of Arc Welding
2. Electrodes: Coated, Types, Selection
3. Welding Joints: Butt, Lap, Tee, Corner, Edge
4. Current Setting, Arc Length, Travel Speed
5. Welding Defects and Remedies

**Practical:**

1. Straight line bead practice on flat plate
2. Lap and butt joint welding in flat position

### **6.1.3 Unit 3: Gas Welding (Oxy-Acetylene)**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. Flame Types: Neutral, Carburizing, Oxidizing
2. Gas Cutting Torch and Welding Torch
3. Pressure Regulation, Gas Flow Rates
4. Brazing and Soldering Basics

**Practical:**

1. Pipe welding using gas flame
2. Fusion welding with filler rods

## **Semester 2: Advanced Welding, Fabrication & Project Work**

### **6.14 Unit 4: TIG/MIG Welding Techniques**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Introduction to Inert Gas Welding
2. Applications in Aluminum, Stainless Steel
3. Machine Settings and Gas Shielding
4. Common Troubleshooting

**Practical:**

1. TIG welding bead on SS plate
2. MIG welding on aluminum test pieces

### **6.1.5 Unit 5: Sheet Metal Work & Fabrication**

**Duration:** 60 Hours (Theory: 20 | Practical: 40)

1. Fabrication Tools: Shears, Press Brake, Bending, Notching
2. Riveting, Spot Welding
3. Blueprint Reading & Marking
4. Layout and Material Estimation

**Practical:**

1. Sheet metal bending project
2. Fabricate a toolbox or tray with joints



## 6.1.6 Unit 6: Welding Inspection & Quality Control

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Types of Welding Defects (Visual and Internal)
2. NDT Methods (Dye Penetrant, Magnetic Particle, Ultrasonic – Intro level)
3. Weld Symbols and IS Standards
4. Documentation & Work Log Maintenance

### **Practical:**

1. Visual inspection of sample welds
2. Weld defect identification and classification

## 6.1.7 Unit 7: Project Work, Portfolio & Viva

**Duration:** 40 Hours

1. Final Project: Fabricate a complete welded structure (e.g., grill, table frame, pipe stand)
2. Work Log and Inspection Sheet Submission
3. Viva & Panel Evaluation

## 6.2 Assessment Format

Component	Weightage
Theory Exam	20%
Practical Skill Tests	45%
Project & Viva	35%

## 6.3 Certification Outcome

**“Certified Welder & Fabrication Technician (Level 4.5)”**

Opportunities:

1. Welder in construction/factories
2. Fabricator in workshops
3. Entry-level QA Inspector
4. Eligible for ITI-equivalent roles or higher-level apprenticeship



## Commerce & Office Skills

### 7.0 Office Secretaryship

**Duration:** 1 Year

**NCRF Level:** 4

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical + Internship)

**Outcome:** Job-ready secretarial and administrative assistant with digital competency and office management skills

## 7.1 Unit-Wise Curriculum Structure

### Semester 1: Office Administration & Communication Skills

#### 7.1.1 Unit 1: Introduction to Office Management

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Role of a Secretary in Modern Offices
2. Types of Offices: Government, Corporate, Legal, Academic
3. Organizational Hierarchy & Chain of Command
4. Time Management & Filing Systems

**Practical:**

1. Create an office layout plan
2. Design a filing system using alphabetical and numeric methods

#### 7.1.2 Unit 2: Communication in the Workplace

**Duration:** 50 Hours (Theory: 30 | Practical: 20)

1. Types of Communication: Verbal, Written, Digital
2. Office Etiquette and Professional Ethics
3. Email Writing, Memo, Circulars, Notices
4. Telephone Handling and Call Management

**Practical:**

1. Draft business letters and professional emails
2. Role-play telephone call scenarios

### **7.1.3 Unit 3: Secretarial Duties & Correspondence**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. Daily, Weekly & Monthly Office Schedules
2. Meeting Agendas, Minutes, and Reporting
3. Handling Confidential Documents
4. Organizing Appointments and Calendars

**Practical:**

1. Prepare minutes of meeting from mock sessions
2. Create a weekly appointment calendar

## **Semester 2: Digital Skills, Filing & Office Tools**

### **7.1.4 Unit 4: Office Automation & Computer Skills**

**Duration:** 60 Hours (Theory: 20 | Practical: 40)

1. MS Word: Document Creation, Formatting, Tables
2. MS Excel: Data Entry, Sorting, Basic Formulas



3. MS PowerPoint: Office Presentations
4. Email Management, Calendar Sync

**Practical:**

1. Prepare a formatted resume and meeting agenda in MS Word
2. Create a leave register in Excel
3. Design a presentation for a business meeting

### **7.1.5 Unit 5: Record Keeping & File Management**

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

1. Manual & Digital Record Keeping
2. File Naming Conventions & Storage Protocols
3. Scanning, Indexing, Archiving
4. Handling Office Inventory and Stock Register

**Practical:**

1. Set up a digital record system using folders & Excel
2. Maintain a dummy inventory register

### **7.1.6 Unit 6: Internship / Project Work**

**Duration:** 40 Hours

1. Field Internship (in school office, private business, or local panchayat office)
2. Final Project Report: Daily Task Log, Observations, Challenges
3. Presentation & Viva

## 7.2 Assessment Pattern

Component	Weightage
Written Exam	25%
Practical Tasks	40%
Project/Internship Viva	35%

## 7.3 Certification Outcome

**“Certified Office Secretary (Level 4)”**

Career Options:

1. Office Assistant / Secretary
2. Receptionist / Executive Assistant
3. Data Entry Operator
4. Personal Assistant in Govt/Private Sectors

## 8.0 Basic Accounting & Tax Procedures

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Software Lab)

**Outcome:** Proficient in manual and basic computerized accounting with knowledge of GST and TDS procedures

## 8.1 Unit-Wise Syllabus Structure

### 8.1.1 Unit 1: Fundamentals of Accounting

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Meaning, Objectives, and Principles of Accounting
2. Types of Accounts (Personal, Real, Nominal)
3. Double Entry System
4. Debit and Credit Concepts
5. Accounting Equation

**Practical:**

1. Classify accounts and perform simple journal entries
2. Apply debit/credit rules to real-world scenarios

### 8.1.2 Unit 2: Books of Original Entry (Journal to Ledger)

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Journalizing Transactions
2. Ledger Posting
3. Trial Balance Preparation
4. Cash Book and Petty Cash Book

5. Sales and Purchase Books

**Practical:**

1. Prepare journal entries from invoices
2. Create ledgers and a trial balance manually

### **8.1.3 Unit 3: Final Accounts for Small Businesses**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Trading Account, Profit & Loss Account
2. Balance Sheet – Assets, Liabilities, Capital
3. Adjustments for Depreciation, Outstanding Expenses, Prepaid Expenses

**Practical:**

1. Prepare a final account from a trial balance
2. Adjustment entry journal preparation

### **8.1.4 Unit 4: Introduction to GST and Indirect Taxation**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. What is GST? Structure and Types (CGST, SGST, IGST)
2. GST Registration Requirements
3. Invoice Format under GST



4. Input Tax Credit (ITC)
5. GST Returns (GSTR-1, GSTR-3B – Intro Level)

**Practical:**

1. Fill dummy GST registration forms
2. Generate a sample GST-compliant invoice
3. Practice GST return filing format

### **8.1.5 Unit 5: Income Tax Basics and TDS**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Income Tax Slabs for Individuals
2. PAN, TAN, and TDS Concept
3. Introduction to Form 16, 26AS
4. TDS Deduction and Deposit Process

**Practical:**

1. Calculate tax liability using slabs
2. Fill sample Form 16 and TDS certificate

### **8.1.6 Unit 6: Project Work & Assessment**

**Duration:** 20 Hours

1. Mini-Project: Prepare books and tax summary for a small business
2. Practice Set File Compilation

### 3. Viva-Voce and Presentation

## Assessment Pattern

Component	Weightage
Theory Examination	30%
Practical Assignments	40%
Project & Viva	30%

## Certification Outcome

**“Certified Assistant in Accounting & Taxation (Level 3.5)”**

Career Opportunities:

1. Accounting Assistant
2. Junior GST Executive
3. TDS Clerk
4. Data Entry Operator for CA Firms

## 9.0 Tally ERP & GST Filing

**Duration:** 6 Months

**NCRF Level:** 4

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical on Software + GST Simulation)

**Outcome:** Proficiency in Tally ERP for accounting, and GST return filing for small to medium businesses

## 9.1 Unit-Wise Syllabus Structure

### 9.1.1 Unit 1: Fundamentals of Tally & Company Setup

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Introduction to Tally ERP 9 / Tally Prime
2. Creating, Altering, and Managing Company
3. Tally Interface: Gateway, Ledgers, Vouchers
4. Setting up Accounts and Inventory

**Practical:**

1. Create companies and enter opening balances
2. Set up groups, ledgers, and stock items

### 9.1.2 Unit 2: Accounting Entries in Tally ERP

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Voucher Types: Contra, Payment, Receipt, Journal, Sales, Purchase

2. Inventory Vouchers and Stock Transfer
3. Day Book, Ledger Book, and Trial Balance
4. Cash Book and Bank Reconciliation

**Practical:**

1. Enter various transaction types with GST implications
2. Prepare bank reconciliation statement

### **9.1.3 Unit 3: GST Configuration in Tally**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. GST Activation and Configuration
2. GST Rate Setup for Products/Services
3. GST Compliance: Interstate vs Intrastate
4. HSN & SAC Codes, Input & Output Tax

**Practical:**

1. Set up GST ledgers and classifications
2. Configure tax rates and enable auto-calculation

### **9.1.4 Unit 4: GST Accounting Transactions**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. GST Vouchers: Sales, Purchase, Credit/Debit Notes
2. GST on Services vs Goods
3. Reversal of ITC and Advance Receipt
4. Composition Scheme & GST Adjustments

**Practical:**

1. Record GST transactions in Tally
2. Use GST reports to verify tax liability

### **9.1.5 Unit 5: GST Return Filing (Practical Exposure)**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. GSTR-1 (Sales), GSTR-3B (Summary), GSTR-9 (Annual)
2. Exporting Returns from Tally
3. Online Filing on GST Portal (Simulation Practice)
4. Payment of GST and Challan Generation
5. E-Way Bill Overview

**Practical:**

1. Generate GST reports in Tally
2. Prepare dummy GSTR files for filing
3. Simulate GST login and form filling

### **9.1.6 Unit 6: Project Work & Viva**

**Duration:** 20 Hours



1. Prepare complete accounts of a business in Tally
2. Generate GST reports and simulate a return filing
3. Submit Project Book and Present GST filing log
4. Viva and Final Evaluation

## 9.2 Assessment Pattern

Component	Weightage
Theory Examination	25%
Practical Lab Tasks	45%
Final Project & Viva	30%

## 9.3 Certification Outcome

**“Certified Tally ERP & GST Filing Executive (Level 4)”**

Career Roles:

1. Tally Accountant
2. GST Filing Assistant
3. Accounts Executive (SMEs, Traders, Freelancers)
4. Junior Tax Assistant (under CA supervision)

## 10.0 Banking & Microfinance Basics

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical Exposure + Simulated Banking Software)

**Outcome:** Skill-ready candidate for support roles in banking, microfinance, and digital finance sectors

## 10.1 Unit-Wise Syllabus Structure

### Semester 1: Foundations of Banking & Financial Services

#### 10.1 Unit 1: Indian Financial System & Banking Overview

**Duration:** 40 Hours (Theory: 30 | Practical: 10)

1. Structure of Indian Financial System (Banks, NBFCs, MFIs)
2. RBI: Roles & Functions
3. Types of Banks: Scheduled, Co-op, Private, Foreign
4. Financial Inclusion & Priority Sector Lending

**Practical:**

1. Bank form filling (account opening, KYC)
2. Identifying bank types through case studies

#### 10.1.2 Unit 2: Banking Operations & Accounts

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

1. Types of Bank Accounts: Savings, Current, FD, RD
2. Passbook, Cheque Book, ATM Cards
3. RTGS, NEFT, IMPS, UPI
4. Mobile Banking and Internet Banking Basics

**Practical:**

1. Simulated net banking demo
2. Fill dummy cheque/withdrawal slips and fund transfer forms

### **10.1.3 Unit 3: Loans, Credit & Documentation**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. Types of Loans: Personal, Business, Education, Agri
2. Loan Documentation and KYC
3. Concept of CIBIL Score and Creditworthiness
4. Loan EMI Calculation and Recovery Process

**Practical:**

1. Loan application form filling
2. EMI calculator usage and repayment schedule generation

## **Semester 2: Microfinance, Digital Finance & Customer Handling**

#### **10.1.4 Unit 4: Microfinance Concepts & SHGs**

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

1. Definition and Role of Microfinance
2. SHG (Self Help Groups) Formation and Records
3. Joint Liability Group (JLG) and Group Lending Models
4. Microcredit, Micro-insurance, Micro-savings

**Practical:**

1. Maintain SHG account and passbook
2. Prepare a group loan proposal

#### **10.1.5 Unit 5: Financial Literacy, Customer Service & Fraud Prevention**

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

1. Financial Planning for Low-Income Groups
2. Basics of Budgeting, Saving, and Insurance
3. Handling Customer Queries, Grievances, and Ethical Conduct
4. Cybersecurity, Online Fraud Detection, KYC Norms

**Practical:**

1. Simulate a financial literacy camp
2. Create a financial plan for a sample low-income customer

#### **10.1.6 Unit 6: Project Work, Simulation & Viva**

**Duration:** 30 Hours

1. Mini Project: Prepare documentation for 3 banking products
2. Visit to a local cooperative bank / MFI / SHG
3. Final Report and Presentation
4. Viva Voce

## 10.2 Assessment Pattern

Component	Weightage
Theory Exam	25%
Practical Application	40%
Project & Viva	35%

## 10.3 Certification Outcome

**“Certified Banking & Microfinance Executive (Level 4.5)”**

Career Prospects:

1. Bank Support Executive
2. Microfinance Field Assistant
3. SHG Facilitator
4. Financial Literacy Volunteer
5. Digital Finance Helpdesk Operator



# 11.0 Computerized Office Management

**Duration:** 6 Months

**NCRF Level:** 4

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Software Practical + Simulation)

**Outcome:** Trained in digital office operations, documentation, communication, and data handling

## 11.1 Unit-Wise Syllabus Structure

### 11.1.1 Unit 1: Introduction to Office Management & IT Tools

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Concept of Office Administration
2. Modern Digital Office Infrastructure
3. Office Equipment: Printers, Scanners, Projectors, EPABX
4. Digital File Handling & Organization

**Practical:**

1. Identify and use scanner, printer, copier
2. Demonstrate file saving, naming, and folder management

### 11.1.2 Unit 2: Document Preparation (Word Processing)

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. MS Word/Google Docs – Formatting, Tables, Headers/Footers
2. Memo, Report, Letter, Resume Drafting
3. Page Setup, Mail Merge, Spellcheck
4. Templates for Certificates, Notices, Office Memos

**Practical:**

1. Create office documents using real templates
2. Generate bulk letters using mail merge

### **11.1.3 Unit 3: Office Communication & Presentation Tools**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Email Etiquette and Calendar Scheduling
2. MS Outlook / Gmail Tools
3. PowerPoint for Business Presentations
4. Telephonic and Video Conferencing Skills

**Practical:**

1. Compose and reply to business emails
2. Create a 5-slide business proposal
3. Simulate a virtual meeting setup

### **11.1.4 Unit 4: Data Entry & Spreadsheet Management**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. MS Excel/Google Sheets – Basics to Intermediate
2. Data Entry Formats, Sorting, Filtering, Validation
3. Simple Formulas and Charts
4. Office Registers: Attendance, Expense, Stock

**Practical:**

1. Create an expense register with formulas
2. Design a bar chart for sales report

### **11.1.5 Unit 5: Record Keeping, Cloud Storage & Security**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Digital Filing System – Local & Cloud
2. Scanning, Archiving, Indexing
3. Google Drive, Dropbox for Office Use
4. Data Privacy, Backup & Cybersecurity Basics

**Practical:**

1. Upload and organize documents on cloud
2. Demonstrate basic backup of office files

### **11.1.6 Unit 6: Mini Project & Viva**

**Duration:** 20 Hours

Prepare full digital documentation for an imaginary office  
Include calendar plan, reports, email samples  
Print and submit the project file  
Viva and Presentation in front of panel

## 11.2 Assessment Breakdown

Component	Weightage
Theory Examination	25%
Practical Skill Tests	45%
Project & Viva	30%

## 11.3 Certification Outcome

**“Certified Computerized Office Executive (Level 4)”**

Suitable Job Roles:

1. Office Assistant / Admin Executive
2. Data Entry & Documentation Officer
3. Reception cum Computer Operator
4. Clerk in Educational or Govt Institutions

# HOSPITALITY & SERVICES

## 12.0 Commercial Cooking

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Kitchen Practical + Food Theory + Safety Drills)

**Outcome:** Trained cook ready for commercial kitchens and basic food service environments

### 12.1 Unit-Wise Curriculum Breakdown

#### 12.1.1 Unit 1: Introduction to Culinary Arts & Kitchen Setup

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Role of a Cook in Commercial Kitchens
2. Types of Food Production Areas: Hot, Cold, Bakery, Pantry
3. Tools & Equipment: Knives, Gas Ranges, Blenders, Mixers
4. Kitchen Terminologies and Brigade System
5. Kitchen Safety, Hygiene & PPE

**Practical:**

1. Demonstration of knife handling and kitchen layout
2. PPE demo, cleaning and sanitizing workspace

#### 12.1.2 Unit 2: Ingredients, Measurements & Pre-Preparation

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Understanding Grains, Vegetables, Fruits, Dairy, Pulses, Spices
2. Weighing, Measuring & Portion Control
3. Basic Cuts: Julienne, Brunoise, Chopping, Dicing
4. Marinating, Blanching, Boiling Techniques

**Practical:**

1. Perform vegetable cutting, weighing, and prep tasks
2. Prepare marinades and practice pre-prep on raw materials

### **12.1.3 Unit 3: Cooking Methods & Techniques**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. Dry Heat Methods: Roasting, Grilling, Baking
2. Moist Heat: Boiling, Poaching, Steaming
3. Combination Methods: Braising, Stewing
4. Using Gas, Induction, Oven Safely

**Practical:**

1. Prepare dishes using different cooking methods
2. Create a simple thali (rice, dal, veg, roti)

### **12.1.4 Unit 4: Indian & Continental Cuisine Basics**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. South & North Indian Regional Dishes
2. Continental Breakfast, Pasta, Salads
3. Gravies, Chutneys, Breads, Pickles
4. Basic Plate Presentation and Garnishing

**Practical:**

1. Cook regional Indian meal (e.g., dosa + chutney, rajma + rice)
2. Prepare soup, sautéed vegetables, sandwiches

### **12.1.5 Unit 5: Food Safety, Storage & Menu Planning**

**Duration:** 20 Hours (Theory: 15 | Practical: 5)

1. Food Safety Standards (FSSAI)
2. FIFO Method, Temperature Zones, Labelling
3. Personal Hygiene & Cross-contamination Control
4. Intro to Menu Designing & Costing Basics



**Practical:**

1. Create a basic menu and estimate food cost
2. Identify safe food storage practices in a mock setup

**12.1.6 Unit 6: Project, Food Demo & Viva**

**Duration:** 20 Hours

1. Cook a full 3-course meal for mock café setup
2. Maintain recipe cards, costing sheets, and photos
3. Presentation, Evaluation, and Viva

**12.2 Assessment Pattern**

Component	Weightage
Theory Exam	25%
Practical Tasks	45%
Project & Viva	30%

**12.3 Certification Outcome**

**“Certified Commercial Cook (Level 3.5)”**

Job Roles:

1. Assistant Cook
2. Prep Chef
3. Catering Staff
4. Cloud Kitchen Operator

## 13.0 Front Office Assistance

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Classroom + Practical + Roleplay)

**Outcome:** Ready for reception and guest handling positions with professional communication and service skills

### 13.1 Unit-Wise Curriculum Breakdown

#### 13.1.1 Unit 1: Introduction to Front Office Operations

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Role of the Front Office Assistant
2. Departments in Hotels/Offices/Hospitals
3. Front Office Layout and Equipment
4. Key Responsibilities and Attributes (Appearance, Attitude, Etiquette)

**Practical:**

1. Identify and label front office areas and tools
2. Demonstrate professional grooming and dress code

### **13.1.2 Unit 2: Communication & Interpersonal Skills**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Verbal & Non-verbal Communication
2. Body Language, Eye Contact, Tone of Voice
3. Answering Phone Calls Professionally
4. Handling Difficult Guests with Empathy

**Practical:**

1. Roleplay: Greeting, answering queries, transferring calls
2. Mock telephone and walk-in guest handling

### **13.1.3 Unit 3: Guest Check-In, Check-Out & Booking Systems**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. Guest Arrival & Departure Procedures
2. Registration Forms, ID Check, Room Allocation
3. Hotel Booking Software Introduction (Fidelio, IDS – concept level)
4. Handling Advance Bookings, Cancellations, Refunds

**Practical:**

1. Simulate check-in/check-out with ID and billing
2. Maintain a manual booking register

### **13.1.4 Unit 4: Office Administration & Documentation**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Visitor Log Management
2. Filing and Organizing Documents
3. Use of Office Equipment: Printer, Scanner, EPABX
4. Handling Stationery and Courier

**Practical:**

1. Maintain a visitor entry register
2. Demonstrate use of intercom, scanner, and photocopier

### **13.1.5 Unit 5: Professional Etiquette & Workplace Safety**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Hospitality Etiquette and Customer Service Ethics
2. Basic Safety: Fire Drill, Emergency Calls, First Aid
3. Complaint Handling Procedures
4. Security Awareness (ID Badges, Restricted Entry Zones)

**Practical:**

1. Fire and emergency exit simulation
2. Roleplay: Resolving complaints professionally

### 13.1.6 Unit 6: Project, Guest Interaction Demo & Viva

**Duration:** 20 Hours

1. Project: Simulate front office for a small hotel/clinic
2. Guest welcome, check-in, room allocation, complaint resolution
3. Logbook of duties performed
4. Viva and Presentation

## 13.2 Assessment Pattern

Component	Weightage
Theory Exam	25%
Practical Roleplays	45%
Project & Viva	30%

## 13.3 Certification Outcome

**“Certified Front Office Assistant (Level 3.5)”**

Job Roles:

1. Receptionist
2. Guest Relations Assistant
3. Office Front Desk Executive
4. Hospital or Hotel Entry Coordinator



# 14.0 Housekeeping Operations

**Duration:** 1 Year

**NCRF Level:** 4

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical + Simulation)

**Outcome:** Professionally trained housekeeping assistant with skills in cleanliness, hygiene, linen care, and guest room maintenance

## 14.1 Unit-Wise Curriculum Breakdown

### Semester 1: Basics of Housekeeping & Guest Room Care

#### 14.1.1 Unit 1: Introduction to Housekeeping

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Importance of Housekeeping in Hospitality
2. Roles and Duties of Housekeeping Staff
3. Areas of Housekeeping: Guest Rooms, Public Areas, Linen Room
4. Grooming Standards, Communication with Guests

**Practical:**

1. Grooming drills and etiquette roleplays
2. Housekeeping department orientation layout

### **14.1.2 Unit 2: Cleaning Equipment & Supplies**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Types of Cleaning Equipment: Mops, Scrubbers, Vacuum, Trolleys
2. Chemicals and Cleaning Agents – Uses and Dilutions
3. Storage, Labeling, and Safety Handling
4. Care and Maintenance of Equipment

**Practical:**

1. Operate cleaning equipment (vacuum, mops)
2. Prepare dilution and clean mock rooms

### **14.1.3 Unit 3: Guest Room Cleaning & Bed Making**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Types of Rooms: Occupied, Vacant, Stayover, Out of Order
2. Daily Cleaning Sequence & Turn-down Service
3. Bed Types and Linen Changing Procedures
4. Room Checklist and Reporting Maintenance Issues

**Practical:**

1. Perform full guest room cleaning simulation
2. Bed making with hospital/guest folds

## **Semester 2: Deep Cleaning, Hygiene, Laundry & Supervision**

### **14.1.4 Unit 4: Public Area Cleaning & Floor Care**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Lobbies, Corridors, Restrooms, Elevators
2. Floor Types: Marble, Tile, Carpet – Care & Polishing
3. Waste Management & Dustbin Handling
4. Pest Control Basics

**Practical:**

1. Floor cleaning using machine/mop methods
2. Clean staircases and glass partitions

### **14.1.5 Unit 5: Linen & Laundry Management**

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

1. Types of Linen and Uniforms
2. Stain Removal Techniques
3. Laundry Cycle: Collection, Sorting, Washing, Drying, Ironing
4. Inventory & Linen Room Procedures

**Practical:**

1. Operate basic washing and ironing equipment
2. Maintain laundry log and storage checklist

### 14.1.6 Unit 6: Hygiene, Safety & Supervised Practice

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Personal Hygiene and Uniform Policy
2. First Aid Basics and Hazardous Material Handling
3. Fire Safety, Evacuation Procedure
4. Supervision and Teamwork in Housekeeping

**Practical:**

1. Fire drill and first aid simulation
2. Conduct peer supervision of room cleaning

### 14.1.7 Unit 7: Final Project, Field Visit & Viva

**Duration:** 30 Hours

1. Project: Maintain guest room checklist, linen log, and cleaning schedule
2. Field visit to a hotel/hospital housekeeping unit
3. Report submission and Viva Voce

## 14.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Evaluation	45%
Project & Viva	30%

## 14.3 Certification Outcome

### “Certified Housekeeping Assistant (Level 4)”

Career Opportunities:

1. Room Attendant (Hotels/Resorts)
2. Housekeeping Staff (Hospitals/Offices)
3. Linen Room Assistant
4. Housekeeping Supervisor (Entry Level)





## 15.0 Bakery & Confectionery

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Kitchen Practical + Recipe Book Development)

**Outcome:** Ready to work as a bakery assistant or start a home-based baking business

### 15.1 Unit-Wise Curriculum Breakdown

#### 15.1.1 Unit 1: Introduction to Bakery Science & Hygiene

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Basics of Baking and History of Bread
2. Kitchen Safety, Fire Safety & First Aid
3. Personal Hygiene and Clean Baking Environment
4. Measuring Systems and Tools in Baking

**Practical:**

1. Demonstrate proper handwashing, apron/glove use
2. Identify and handle bakery tools and equipment

#### 15.1.2 Unit 2: Breads & Doughs

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Ingredients: Flour, Yeast, Salt, Water, Fat
2. Types of Dough: Soft, Hard, Sweet, Enriched
3. Kneading, Proofing, Fermentation
4. Bread Varieties: White, Brown, Bun, Rolls

**Practical:**

1. Prepare basic white bread, buns, and multigrain loaf
2. Practice dough shaping and baking

### **15.1.3 Unit 3: Cakes, Batters & Sponges**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Types of Cakes: Pound, Sponge, Foam, Chiffon
2. Mixing Methods: Creaming, Folding, Whisking
3. Baking Techniques: Oven Settings, Temperature Control
4. Cake Testing, Cooling & Storage

**Practical:**

1. Bake a vanilla sponge cake and chocolate cake
2. Demonstrate different batter mixing techniques

### **15.1.4 Unit 4: Icing, Filling & Decoration**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Buttercream, Whipped Cream, Ganache, Fondant
2. Piping Techniques and Nozzles
3. Layering and Filling Techniques
4. Cake Finishing and Presentation

**Practical:**

1. Ice a birthday cake and apply basic decorations
2. Create rosettes, borders, and lettering

### **15.1.5 Unit 5: Cookies, Pastries & Confectionery**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Biscuits, Shortbread, Choux Pastry
2. Tarts, Eclairs, Puff Pastry Products
3. Basic Sugar Work and Chocolate Garnish
4. Shelf Life and Packaging

**Practical:**

1. Bake chocolate chip cookies and tart shells
2. Prepare puff pastry items and cream puffs

### **15.1.6 Unit 6: Project Work & Bakery Portfolio**

**Duration:** 30 Hours

1. Prepare a mini bakery menu (5–7 items)
2. Bake 3 items independently with costing sheet
3. Recipe logbook compilation
4. Portfolio Presentation and Viva

## 15.2 Assessment Structure

Component	Weightage
Theory Exam	25%
Practical Tests	45%
Project & Viva	30%

## 15.3 Certification Outcome

**“Certified Assistant Baker & Confectioner (Level 3.5)”**

Career Opportunities:

1. Bakery Assistant
2. Café Kitchen Staff
3. Pastry Apprentice
4. Home Baker / Small Bakery Entrepreneur

# Information technology

## 16.0 Web Designing

**Duration:** 6 Months

**NCRF Level:** 4

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Project-Based Learning)

**Outcome:** Skill-ready in front-end web development and website design using standard tools and technologies

### 16.1 Unit-Wise Curriculum Breakdown

#### 16.1.1 Unit 1: Introduction to Web Design & Internet Basics

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. What is Web Design? Roles and Scope
2. Working of Websites and Browsers
3. Website Types: Static, Dynamic, Responsive
4. Domain, Hosting, and Web Servers

**Practical:**

1. Explore and analyze websites (source code view)
2. Register a dummy domain and set up free hosting (simulation)



## **16.1.2 Unit 2: HTML – The Building Block of Web Pages**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. HTML5 Syntax and Document Structure
2. Tags: Headings, Paragraphs, Images, Links, Lists, Tables
3. Forms: Input, Textarea, Button, Select
4. Semantic Tags and SEO Basics

**Practical:**

1. Create a sample HTML homepage
2. Design a feedback form using HTML form tags

## **16.1.3 Unit 3: CSS – Styling Web Pages**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

Introduction to CSS and Types: Inline, Internal, External

Selectors, Colors, Fonts, Backgrounds

Box Model, Padding, Margin, Border

Layout: Flexbox, Grid, Positioning

Responsive Design with Media Queries

**Practical:**

1. Style a homepage using CSS
2. Make a two-column responsive layout

#### **16.1.4 Unit 4: JavaScript Basics (Introductory Level)**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Introduction to JavaScript and Interactivity
2. Variables, Data Types, Operators
3. Functions, Conditions, Loops
4. DOM Manipulation (basic level)
5. Simple Form Validation using JavaScript

**Practical:**

1. Add a “click me” button to change content/color
2. Create basic form validation (required fields)

#### **16.1.5 Unit 5: Web Tools, Hosting & Site Deployment**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Code Editors: VS Code, Sublime
2. Version Control Basics: Git (concept level)
3. File Management & FTP Tools
4. Publishing Websites on GitHub Pages / Netlify
5. Google Fonts, Icons, and Frameworks (Bootstrap Intro)

**Practical:**

1. Upload and deploy a static site using GitHub Pages
2. Add icons and fonts to improve visual appeal

## 16.1.6 Unit 6: Final Project & Portfolio Presentation

**Duration:** 30 Hours

1. Create a 4-5 page fully functional website (Personal Portfolio / NGO / Product Page)
2. Documentation and wireframe planning
3. Project Presentation, Live Demo, and Viva

## 16.2 Assessment Structure

Component	Weightage
Theory Exam	20%
Practical Tasks	40%
Final Project & Viva	40%

## 16.3 Certification Outcome

**“Certified Web Designer (Level 4)”**

Career Opportunities:

1. Web Designer (Freelance / Entry-level)
2. UI Assistant
3. Front-End Developer (Junior)
4. Website Management for small businesses

## 17.0 Data Entry & Processing

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Lab Practice + Classroom Sessions)

**Outcome:** Trained for roles such as Data Entry Operator, Back Office Assistant, and MIS Executive (Junior)

### 17.1 Unit-Wise Curriculum Breakdown

#### 17.1.1 Unit 1: Introduction to Data Entry Operations

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Role and Scope of Data Entry
2. Understanding Structured & Unstructured Data
3. Importance of Accuracy and Confidentiality
4. Work Ethics and Office Etiquette

**Practical:**

1. Simulate office data entry tasks
2. Explore MIS formats and digital registers

### **17.1.2 Unit 2: Typing Skills & Keyboarding Techniques**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Touch Typing Techniques (Home Row Method)
2. Typing Accuracy and Speed Improvement
3. Shortcuts and Function Keys
4. Typing Tests and Metrics (WPM, Accuracy%)

**Practical:**

1. Practice typing on online tools (e.g., TypingClub)
2. Weekly speed and accuracy evaluations

### **17.1.3 Unit 3: MS Word for Document Management**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Creating, Formatting, and Editing Documents
2. Tables, Bullets, Numbering, and Headers
3. Inserting Charts, Images, and SmartArt
4. Resume, Letter, and Report Formats

**Practical:**

1. Draft and format sample letters and reports
2. Data entry into structured MS Word tables



#### **17.1.4 Unit 4: Spreadsheet (Excel/Google Sheets) Handling**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Data Entry in Cells, Formatting
2. Sorting, Filtering, Basic Formulas (SUM, AVG, COUNT)
3. Data Validation, Drop-downs, and Conditional Formatting
4. Creating Attendance Sheets, Registers, Tally Sheets

**Practical:**

1. Create and manage daily entry records
2. Generate charts from raw data

#### **17.1.5 Unit 5: File Handling, Conversion & Basic MIS**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. File Types: DOC, XLS, PDF, CSV
2. File Naming, Saving, Conversion (PDF to Word, CSV to XLS)
3. Introduction to MIS and Basic Dashboards
4. Data Privacy and Cyber Hygiene

**Practical:**

1. Convert reports into multiple formats
2. Create a basic MIS summary report

### 17.1.6 Unit 6: Project Work & Viva

**Duration:** 30 Hours

1. Final Project: Complete a simulated data entry and reporting task
2. Speed & Accuracy Assessment
3. Portfolio Submission: 5 types of formatted documents
4. Viva based on understanding, tools, and keyboard practice

## 17.2 Assessment Format

Component	Weightage
Theory Examination	20%
Typing Test + Accuracy	25%
Practical Assignments	30%
Project & Viva	25%

## 17.3 Certification Outcome

**“Certified Data Entry & Processing Assistant (Level 3.5)”**

Career Opportunities:

1. Data Entry Operator (Govt/Private Projects)
2. MIS Clerk / Support
3. Back Office Executive
4. Survey or Form Entry Staff

# 18.0 Hardware & Networking Basics

**Duration:** 1 Year

**NCRF Level:** 4

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical Lab Sessions + Simulations)

**Outcome:** Trained for roles such as IT Support Assistant, Network Technician (Entry-Level), and Computer Hardware Repair Executive

## 18.1 Unit-Wise Curriculum Breakdown

### Semester 1: Computer Hardware Essentials

#### 18.1.1 Unit 1: Basics of Computer Hardware

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Types of Computers and Generations
2. Input, Output, Processing, and Storage Devices
3. Motherboard, Chipsets, SMPS, Ports
4. Assembling and Disassembling a PC

#### **Practical:**

1. Identify hardware components
2. Assemble a basic desktop computer

### **18.1.2 Unit 2: Memory, Storage & Power Supply**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. RAM, ROM, Cache – Types and Functions
2. HDD vs SSD – Installation and Formatting
3. Power Supply Units – Ratings and Connectors
4. BIOS/UEFI and Booting Process

**Practical:**

1. Install RAM and hard drives
2. Configure BIOS settings and boot from USB

### **18.1.3 Unit 3: Operating System Installation & Maintenance**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Operating Systems Overview (Windows, Linux – concept)
2. Installing OS, Drivers, and Software
3. Disk Partitioning, Formatting, Antivirus Setup
4. Backup, Restore, and Troubleshooting Boot Errors

**Practical:**

1. Perform a fresh OS installation
2. Install drivers and update a system

## **Semester 2: Networking Fundamentals & System Security**

### **18.1.4 Unit 4: Basics of Networking**

**Duration:** 60 Hours (Theory: 30 | Practical: 30)

1. Network Types: LAN, MAN, WAN
2. Wired vs Wireless Networks
3. IP Addressing, Subnetting (Intro), DHCP, DNS
4. Routers, Switches, Cables (RJ45, CAT5/CAT6), Crimping

**Practical:**

1. Setup a small LAN using switches and routers
2. Assign static IP and test connectivity

### **18.1.5 Unit 5: Network Sharing, Troubleshooting & Tools**

**Duration:** 60 Hours (Theory: 20 | Practical: 40)

1. File and Printer Sharing
2. Command Line Tools: ping, ipconfig, tracert
3. Troubleshooting Network Issues
4. Cable Testing and Fault Diagnosis

**Practical:**

1. Share files and printers over LAN
2. Run connectivity checks and simulate faults



### 18.1.6 Unit 6: System Protection & Cyber Hygiene

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Virus, Malware, Spyware – Prevention and Removal
2. Firewalls, Anti-Virus, Secure Browsing
3. Physical Security of Systems
4. Data Backup and Recovery Techniques

**Practical:**

1. Scan and remove malware using antivirus
2. Setup basic firewall settings on Windows

### 18.1.7 Unit 7: Project, Practical Log & Viva

**Duration:** 30 Hours

1. Mini Project: Set up a functional office LAN or repair 2 systems
2. Maintain a logbook of system assembly and troubleshooting
3. Project Presentation and Viva

## 18.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Skill Tests	45%
Project & Viva	30%

## 18.3 Certification Outcome

### “Certified Hardware & Networking Technician (Level 4)”

Career Opportunities:

1. IT Support Assistant (Schools, Shops, Offices)
2. System Maintenance Technician
3. Entry-Level Network Technician
4. Freelance PC Assembler/Repair Expert



# 19.0 Python / Java Programming

**Duration:** 6 Months

**NCRF Level:** 4.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Code Lab + Project-Based Learning)

**Outcome:** Proficiency in writing, debugging, and executing programs using Python and Java with real-world logic-building

## 19.1 Unit-Wise Curriculum Breakdown

### 19.1.1 Unit 1: Introduction to Programming Concepts

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. What is Programming?
2. Algorithms, Flowcharts, and Pseudocode
3. Data Types, Variables, and Input/Output
4. IDE Setup (IDLE for Python, BlueJ/Eclipse for Java)

**Practical:**

1. Write “Hello World” programs in Python and Java
2. Simple I/O-based user programs

### 19.1.2 Unit 2: Control Structures

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Conditional Statements: if, if-else, nested if
2. Loops: for, while, do-while (Java specific)
3. Break, Continue, Pass (Python specific)
4. Simple pattern generation and logic building

**Practical:**

1. Write control flow programs: grading system, menu-based app
2. Prime number, factorial, table printing

### **19.1.3 Unit 3: Functions & Modular Coding**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Defining Functions, Return Types
2. Parameters vs Arguments
3. Built-in vs User-defined Functions
4. Method Overloading (Java) / \*args, \*\*kwargs (Python)

**Practical:**

1. Build a calculator using functions
2. Write reusable blocks and test function outputs

### **19.1.4 Unit 4: Data Structures (Lists/Arrays)**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Lists in Python / Arrays in Java
2. String Manipulations
3. Tuples, Sets (Python) / ArrayLists (Java)
4. Sorting and Searching (Linear, Bubble)

**Practical:**

1. Search & sort student records
2. Basic string encryption / palindrome checker

### **19.1.5 Unit 5: Object-Oriented Programming (OOP)**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Classes and Objects
2. Constructors & Methods
3. Inheritance, Polymorphism (Intro level)
4. Encapsulation & Abstraction Basics

**Practical:**

1. Create a class for Student with methods
2. Extend a class to include attendance or marks

### **19.1.6 Unit 6: Mini Project & Viva**

**Duration:** 30 Hours

1. Project Ideas:
  1. **Python:** Quiz App, Library Management, Simple Calculator
  2. **Java:** Student Record Manager, Billing System, Console Game
2. Submit code, output screenshots, and documentation
3. Viva and code explanation



## 19.2 Assessment Format

Component	Weightage
Theory Exam	25%
Practical Programming	40%
Final Project & Viva	35%

## 19.3 Certification Outcome

**“Certified Programming Associate – Python/Java (Level 4.5)”**

Career Paths:

1. Junior Developer
2. IT Lab Assistant
3. Software Trainee (Python or Java)
4. Competitive Coding Beginner

## 20.0 Multimedia & Animation

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Lab + Project-Based Learning)

**Outcome:** Proficiency in multimedia design tools, visual storytelling, and 2D animation techniques

### 20.1 Unit-Wise Curriculum Breakdown

#### Semester 1: Multimedia Foundations & Design

##### 20.1.1 Unit 1: Introduction to Multimedia

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. What is Multimedia? Scope and Applications
2. Text, Images, Audio, Video, Animation – Key Elements
3. File Types & Formats
4. Introduction to Multimedia Authoring Tools

#### **Practical:**

1. Identify multimedia components
2. Create a basic multimedia storyboard

### **20.1.2 Unit 2: Graphic Design Principles & Tools**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

1. Principles of Design: Balance, Contrast, Emphasis, Unity
2. Color Theory and Typography
3. Intro to Adobe Photoshop / Canva / GIMP
4. Designing Posters, Logos, Thumbnails

**Practical:**

1. Create event posters and branding designs
2. Practice basic image correction and retouching

### **20.1.3 Unit 3: Audio & Video Editing Basics**

**Duration:** 50 Hours (Theory: 15 | Practical: 35)

1. Audio Editing with Audacity / Adobe Audition
2. Video Formats and Resolutions
3. Basic Editing in Filmora / Premiere Pro / CapCut
4. Transitions, Titles, Background Music

**Practical:**

1. Edit a short video clip with audio
2. Add titles, effects, and background sound

## **Semester 2: Animation & Multimedia Projects**

### **20.1.4 Unit 4: Introduction to Animation & Storyboarding**

**Duration:** 60 Hours (Theory: 30 | Practical: 30)

1. History and Types of Animation (2D/3D/Stop Motion)
2. Frames, Keyframes, Tweening
3. Storyboarding for Animation
4. Character Design Basics

**Practical:**

1. Draw and animate a stick figure walk cycle
2. Create a 6-panel storyboard with captions

### **20.1.5 Unit 5: 2D Animation Software Tools**

**Duration:** 60 Hours (Theory: 20 | Practical: 40)

1. Using **Adobe Animate**, **OpenToonz**, or **Pencil2D**
2. Scene Creation, Layers, Motion Path
3. Lip-syncing and Timing Basics
4. Exporting Animated Videos

**Practical:**

1. Animate a character blinking and waving
2. Create a short animated greeting card

## 20.1.6 Unit 6: Portfolio Development & Project Work

**Duration:** 60 Hours

1. Create a final project combining design, animation, and sound
2. Project Ideas:
  1. Animated Public Awareness Video
  2. Personal Portfolio Site
  3. Educational Cartoon
3. Documentation, Poster Design, and Presentation
4. Viva and Evaluation

## 20.2 Assessment Pattern

Component	Weightage
Theory Examination	25%
Practical Skill Tests	35%
Final Project & Viva	40%

## 20.3 Certification Outcome

**“Certified Multimedia & 2D Animation Assistant (Level 4.5)”**

Career Options:

1. Graphic Designer (Junior)
2. Video Editor / YouTube Assistant
3. Animation Intern / Storyboard Artist
4. Freelance Media Creator



## 21.0 Course Title: AI & ML Foundation Course

**Duration:** 6 Months

**NCRF Level:** 4.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Labs + Project-Based Learning)

**Outcome:** Understand AI/ML concepts, build basic models, and develop an AI-based project using Python

### 21.1 Unit-Wise Syllabus Structure

#### 21.1.1 Unit 1: Introduction to AI & ML

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. What is Artificial Intelligence? History & Applications
2. Differences: AI vs ML vs Data Science
3. Real-World Examples: Chatbots, Face Recognition, Recommendation Systems
4. Ethical Use of AI & Bias in Models

**Practical:**

1. Explore Google Teachable Machine or Scratch AI for visual understanding
2. Identify AI use cases in daily life

### **21.1.2 Unit 2: Python for AI & ML (Beginner Level)**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Python Syntax Basics: Variables, Data Types, I/O
2. Lists, Dictionaries, Loops, Conditional Statements
3. Functions, Libraries, and Basic File Handling
4. Libraries: NumPy, Pandas (Intro)

**Practical:**

1. Write a Python program to analyze student marks
2. Load and process data using Pandas

### **21.1.3 Unit 3: Data Handling & Visualization**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. What is Data? Types of Data
2. Data Cleaning and Preprocessing
3. Mean, Median, Mode, Standard Deviation
4. Data Visualization using Matplotlib/Seaborn

**Practical:**

1. Plot a bar chart and pie chart using Matplotlib
2. Clean a CSV file with missing values

### **21.1.4 Unit 4: Machine Learning Concepts & Tools**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. What is Machine Learning? Types: Supervised vs Unsupervised
2. Introduction to Algorithms: Linear Regression, Classification, Clustering
3. Training and Testing Data
4. Intro to Scikit-learn and ML Model Flow

**Practical:**

1. Build a linear regression model on sample data
2. Train a classification model using decision trees

### **21.1.5 Unit 5: AI Applications using Tools**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. AI Chatbots and NLP Basics
2. Image Recognition (Using Teachable Machine or TensorFlow Lite)
3. Voice-based AI using Python Libraries
4. Low-code AI Tools (Lobe, Google AutoML – Intro only)

**Practical:**

1. Build a Teachable Machine project (image-based prediction)
2. Create a basic chatbot using Python or chatbot platform

## 21.1.6 Unit 6: Final Project & Presentation

**Duration:** 30 Hours

1. Develop a working mini project using AI/ML:
  1. Predicting student performance
  2. Image classification (cat/dog, food detection)
  3. Chatbot for library helpdesk
2. Report Writing and Demo
3. Viva and Evaluation

## 21.2 Assessment Format

Component	Weightage
Theory Examination	20%
Practical Assignments	40%
Final Project & Viva	40%

## 21.4 Certification Outcome

**“Certified AI & ML Foundations Associate (Level 4.5)”**

Career Opportunities:

1. AI/ML Intern
2. Junior Data Analyst (Entry Level)
3. Python Programmer (Basic)
4. Eligible for advanced diploma in AI or Data Science

# Agriculture & Allied

## 22.0 Dairy Technician

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Field Exposure)

**Outcome:** Skilled in milk handling, testing, pasteurization, and dairy product preparation

## 22.1 Unit-Wise Curriculum Breakdown

### 22.1.1 Unit 1: Introduction to Dairy Technology

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Role of Dairy Industry in India
2. Milk Composition & Nutritional Value
3. Types of Milk (Buffalo, Cow, Toned, Full Cream)
4. Overview of Dairy Products: Ghee, Paneer, Curd, Butter

**Practical:**

1. Identify types of milk and measure density
2. Collect and record milk samples from field



### **22.1.2 Unit 2: Milk Collection & Quality Testing**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Milk Collection Procedures at Village Level
2. Platform Tests: Organoleptic, Clot on Boiling (COB), Alcohol Test
3. SNF (Solid Not Fat) and Fat Measurement (Lacto-meter, Gerber Test)
4. Adulteration Checks: Urea, Water, Detergent

**Practical:**

1. Conduct FAT/SNF test
2. Use lactometer and Gerber centrifuge

### **22.1.3 Unit 3: Milk Preservation & Storage**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Milk Chilling Methods – Bulk Milk Coolers
2. Prevention of Bacterial Growth
3. Cold Chain Management
4. Hygiene & Sanitation at Collection Centers

**Practical:**

1. Operate a basic milk chilling unit
2. Practice safe cleaning of milk cans and containers

## **22.1.Unit 4: Pasteurization & Milk Processing**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Filtration, Clarification, Pasteurization (LTLT, HTST)
2. Standardization & Homogenization of Milk
3. Processing Flowchart from Farm to Packet
4. Milk Packaging & Labelling Basics

### **Practical:**

1. Pasteurize milk sample and check shelf life
2. Prepare standard milk for packaging

## **22.1.5 Unit 5: Dairy Products Preparation**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Paneer, Curd, Buttermilk, Ghee – Methods and Ratios
2. Fermentation Basics
3. Hygiene in Dairy Product Rooms
4. Shelf-life, Packaging, Storage

### **Practical:**

1. Prepare paneer and pack it
2. Make curd and buttermilk from pasteurized milk

## 22.1.6 Unit 6: Project Work & Practical Assessment

**Duration:** 30 Hours

Create a dairy logbook with daily records

Set up a mini dairy station simulation

Presentation: “Milk to Market” flow

Viva and skills demonstration

## 23.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Skills Test	40%
Project & Viva	35%

## 23.3 Certification Outcome

**“Certified Dairy Technician (Level 3.5)”**

Career Opportunities:

1. Dairy Collection Center Assistant
2. Milk Quality Testing Operator
3. Dairy Product Maker
4. Self-employed Micro Dairy Entrepreneur

## 24.0 Poultry Farm Assistant

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Farm Practical + Theory + Field Exposure)

**Outcome:** Ready to support poultry farming operations in hatcheries, broiler farms, or as self-employed growers

### 24.1 Unit-Wise Curriculum Structure

#### 24.1.1 Unit 1: Introduction to Poultry Farming

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Types of Poultry: Broilers, Layers, Country Chickens
2. Breeds and Their Characteristics
3. Poultry Farming Systems: Deep Litter, Cage, Free Range
4. Role of a Farm Assistant in Poultry Management

**Practical:**

1. Identification of different poultry breeds
2. Demonstrate use of poultry housing models

#### 24.1.2 Unit 2: Housing, Equipment & Daily Operations

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Poultry Shed Construction and Ventilation
2. Brooding Equipment: Heaters, Feeders, Drinkers
3. Cleaning, Lighting & Record-Keeping
4. Routine Farm Activities (Feeding, Egg Collection, Cleaning)

**Practical:**

1. Simulate daily care of birds
2. Clean and disinfect poultry housing

### **24.1.3 Unit 3: Poultry Nutrition & Feed Management**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Nutrient Needs: Protein, Carbs, Vitamins, Minerals
2. Types of Feed: Starter, Grower, Finisher
3. Feed Formulation Basics
4. Water Quality and Supply

**Practical:**

1. Prepare feed mixtures
2. Demonstrate feeding routine for broilers and layers

### **24.1.4 Unit 4: Disease Management & Vaccination**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Common Poultry Diseases: Ranikhet, Coccidiosis, Fowlpox
2. Symptoms and First-Aid Measures
3. Vaccination Schedules
4. Biosecurity and Farm Hygiene



**Practical:**

1. Administer dummy vaccinations (simulation)
2. Set up biosecurity zones

### **24.1.5 Unit 5: Marketing & Record Maintenance**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. Marketing of Eggs, Meat, and By-products
2. Price Calculation & Profit Margins
3. Maintain Daily Log Books: Feed, Mortality, Medication
4. Government Support Schemes for Poultry Farmers

**Practical:**

1. Fill dummy marketing and purchase records
2. Prepare a price comparison chart for feeds and chicks

### **24.1.6 Unit 6: Project, Field Visit & Viva**

**Duration:** 30 Hours

1. Visit to a local poultry farm or hatchery
2. Prepare a sample poultry business plan
3. Presentation of learning logbook and project findings
4. Viva-voce examination

## 24.2 Assessment Pattern

Component	Weightage
Theory Exam	25%
Practical Skill Tasks	45%
Project & Viva	30%

## 24.3 Certification Outcome

**“Certified Poultry Farm Assistant (Level 3.5)”**

Career Paths:

1. Poultry Farm Worker
2. Hatchery Assistant
3. Feed Distribution Helper
4. Self-employed Poultry Micro-entrepreneur

## 25.0 Basic Horticulture

**Duration:** 1 Year

**NCRF Level:** 4

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Field Practice + Nursery Work)

**Outcome:** Proficient in fruit, vegetable, and ornamental plant cultivation with skills in nursery techniques and post-harvest care

## 25.1 Unit-Wise Syllabus Structure

### Semester 1: Fundamentals of Horticulture & Nursery Practices

#### 25.1.1 Unit 1: Introduction to Horticulture

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

1. Definition, Importance, and Scope of Horticulture
2. Classification of Horticultural Crops
3. Principles of Garden Design and Plant Selection
4. Climatic and Soil Requirements

**Practical:**

1. Identify different plant types (fruit, flower, medicinal)
2. Prepare basic garden layout plans

#### 25.1.2 Unit 2: Soil, Water, and Nutrient Management

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

1. Soil Types, Texture, and Testing
2. Organic Manures, Vermicompost, Fertilizers
3. Irrigation Methods (Drip, Sprinkler, Basin)
4. Mulching and Soil Conservation Techniques

**Practical:**

1. Soil pH testing, compost preparation
2. Demonstrate watering and fertilizer application

### **25.1.3 Unit 3: Nursery Techniques & Plant Propagation**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

1. Types of Nurseries: Fruit, Ornamental, Vegetable
2. Propagation: Seeds, Cuttings, Grafting, Budding, Layering
3. Nursery Tools & Containers
4. Care of Seedlings and Transplanting

**Practical:**

1. Sow seeds in nursery beds and trays
2. Practice grafting and cutting techniques

### **Semester 2: Fruit, Vegetable & Ornamental Crop Management**

#### **25.1.4 Unit 4: Fruit & Vegetable Crop Cultivation**

**Duration:** 60 Hours (Theory: 30 | Practical: 30)

1. Planning of Fruit Orchard (Mango, Banana, Citrus, Papaya)
2. Seasonal Vegetables (Tomato, Brinjal, Okra, Spinach)
3. Crop Rotation and Intercropping
4. Harvesting and Yield Estimation

**Practical:**

1. Prepare land for a sample plot
2. Demonstrate sowing, spacing, and interculture practices

### **25.1.5 Unit 5: Floriculture & Landscaping**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. Annuals, Perennials, Foliage, and Flowering Plants
2. Lawn Establishment and Maintenance
3. Indoor Plants and Vertical Gardens
4. Use of Pots, Planters, and Decorative Techniques

**Practical:**

1. Pot a flowering plant and maintain it
2. Create a model home garden/terrace garden

### **25.1.6 Unit 6: Plant Protection & Post-Harvest Handling**

**Duration:** 50 Hours (Theory: 30 | Practical: 20)

1. Common Pests and Diseases of Horticultural Crops
2. Use of Organic and Chemical Pesticides
3. Pruning, Training, and Weed Management
4. Grading, Packaging, Storage, and Transport

**Practical:**

1. Prepare organic pesticide mix
2. Grade and pack fruits/vegetables for market



### 25.1.7 Unit 7: Project, Field Visit & Viva

**Duration:** 40 Hours

1. Maintain a mini kitchen garden or nursery
2. Visit a local farm, nursery, or Krishi Vigyan Kendra
3. Submit field diary and present learnings
4. Viva and Evaluation

### 27.2 Assessment Pattern

Component	Weightage
Theory Examination	25%
Practical Activities	45%
Project & Viva	30%

### 27.3 Certification Outcome

**“Certified Horticulture Technician (Level 4)”**

Career Pathways:

1. Nursery Assistant
2. Farm Worker / Supervisor
3. Landscape Gardener
4. Self-employed kitchen gardener or terrace farming guide

## 28.0 Sericulture Worker

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Field-Based + Theory + Farm Internship)

**Outcome:** Trained in mulberry cultivation, silkworm care, cocoon production, and silk reeling basics

### 28.1 Unit-Wise Syllabus Structure

#### 28.1.1 Unit 1: Introduction to Sericulture

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

1. History and Importance of Sericulture in India
2. Types of Silk: Mulberry, Tussar, Eri, Muga
3. Sericulture Value Chain Overview
4. Scope of Employment and Self-employment

**Practical:**

1. Identification of silk varieties and their end-products
2. Visit to a basic rearing setup (if possible)

#### 28.1.2 Unit 2: Mulberry Cultivation Techniques

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

1. Suitable Soil and Climatic Conditions
2. Mulberry Varieties and Propagation Methods
3. Planting, Pruning, and Irrigation

4. Organic & Inorganic Fertilizer Application

**Practical:**

1. Prepare mulberry nursery beds
2. Practice pruning and irrigation

### **28.1.3 Unit 3: Silkworm Rearing and Management**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

1. Silkworm Life Cycle and Rearing House Setup
2. Rearing Equipment: Trays, Stands, Nets
3. Feeding Schedules for Chawki and Late Age Larvae
4. Disinfection and Rearing Hygiene

**Practical:**

1. Rear silkworms for one full cycle (on rotation if needed)
2. Maintain feeding and cleaning logs

### **28.1.4 Unit 4: Cocoon Harvesting and Grading**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

1. Signs of Maturity and Mounting
2. Cocoon Harvesting Techniques
3. Grading by Size, Shape, Color, and Weight
4. Storage and Transport of Cocoons

**Practical:**

- Practice mounting and cocoon collection
- Grade and sort harvested cocoons

### 28.1.5 Unit 5: Silk Reeling (Introductory)

**Duration:** 20 Hours (Theory: 10 | Practical: 10)

- Basics of Cocoon Boiling and Thread Extraction
- Use of Charkha and Cottage Basin
- Types of Yarn: Filament, Thrown Silk, Waste Silk
- Quality Parameters in Silk

**Practical:**

- Observe and assist in silk reeling (demo-based)
- Wind silk thread onto reels manually

### 28.1.6 Unit 6: Project, Field Visit & Viva

**Duration:** 30 Hours

- Visit to a government sericulture farm or private cocoon market
- Document silkworm rearing and harvesting cycle
- Submit a field report with pictures/logs
- Final viva with demonstration

## 28.2 Assessment Structure

Component	Weightage
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Theory Exam	25%
Practical Evaluation	45%
Project & Viva	30%

## 28.3 Certification Outcome

### “Certified Sericulture Worker (Level 3.5)”

Career Roles:

- Silkworm Rearing Assistant
- Mulberry Farm Labourer
- Cocoon Grader / Quality Checker
- Micro-entrepreneur in backyard sericulture

## Health & Paramedical

## 29.0 Medical Lab Assistant

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Clinical Lab Practice + Hospital Exposure)

**Outcome:** Competency in basic laboratory techniques, assisting in medical diagnostic procedures

## 29.1 Unit-Wise Syllabus Structure



### **29.1.1 Unit 1: Introduction to Medical Lab Science**

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

- Role and Duties of Lab Assistants
- Lab Setup, Ethics, and Safety
- Medical Terminology Overview
- Biomedical Waste Categories & Disposal

**Practical:**

- Lab hygiene demonstration
- Color coding of waste and disposal bin setup

### **29.1.2 Unit 2: Anatomy, Physiology & Blood Collection**

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

- Basic Human Body Systems (Digestive, Circulatory, Urinary)
- Structure & Functions of Blood
- Capillary and Venous Blood Sampling Techniques
- Anticoagulants and Blood Storage

**Practical:**

- Mock blood collection (using training kits)
- Labeling, barcoding, and registering samples

### 29.1.3 Unit 3: Laboratory Equipment & Usage

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

- Centrifuge, Microscope, Hemocytometer
- Colorimeter, Incubator, Autoclave
- Glassware Handling: Test Tubes, Pipettes, Slides
- Calibration and Maintenance

**Practical:**

- Operate microscope and record observations
- Autoclave sterilization cycle demo

Semester 2: Diagnostic Testing & Reporting

### 29.1.4 Unit 4: Hematology & Blood Analysis

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

- RBC, WBC, Platelet Count
- Hemoglobin Estimation
- Blood Grouping & Cross Matching
- ESR & PCV Testing

**Practical:**

- Manual and automated blood analysis
- Prepare and stain blood smears

### 29.1.5 Unit 5: Urine, Stool & Sputum Testing

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

- Physical, Chemical, and Microscopic Examination
- Albumin, Sugar, pH, Bile Salt Testing
- Wet Mounts & Parasite Identification
- Sample Collection Protocols

**Practical:**

- Perform routine urine test (strip and microscope)
- Detect abnormalities in stool/sputum slides

### **29.1.6 Unit 6: Report Writing, Records & Field Work**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

- Preparing Lab Test Reports
- Lab Information System (LIS) Overview
- Infection Control in Lab Environment
- Field visit to a Diagnostic Lab/Hospital

**Practical:**

- Generate test reports (manual + basic software)
- Maintain patient test records

### **29.1.7 Unit 7: Project & Viva Voce**

**Duration:** 30 Hours

- Case-based logbook of 10+ samples/tests
- Observation diary for hospital/lab visit

- Oral viva and final practical demonstration

## 29.2 Assessment Pattern

Component	Weightage
Theory Examination	25%
Practical Assessment	45%
Project & Viva	30%

## 29.3 Certification Outcome

**“Certified Medical Lab Assistant (Level 4.5)”**

Career Options:

- Lab Technician Assistant
- Sample Collection Technician
- Pathology Lab Support Staff
- Eligible for DMLT (next level)

## 30.0 Health Care Worker

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Simulation + Patient Care Practice)

**Outcome:** Skill-ready assistant for basic patient care, hygiene, and support under the supervision of nurses or paramedics

## 30.1 Unit-Wise Curriculum Breakdown

### 30.1.1 Unit 1: Introduction to Health Care & Ethics

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Overview of Healthcare System in India
- Role of a Health Care Worker
- Communication Skills & Behavior with Patients
- Professional Ethics and Confidentiality

**Practical:**

- Role-play on patient communication and empathy
- Cleanliness and etiquette demo in clinical settings

### 30.1.2 Unit 2: Human Body Basics & Vital Signs

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Basic Anatomy and Physiology (intro level)
- Body Temperature, Pulse, Respiration, Blood Pressure
- Normal Ranges and When to Alert Nurses
- Observation and Documentation

**Practical:**

- Practice measuring pulse, temperature, BP (using dummy/patient models)
- Record readings in a patient chart



### **30.1.3 Unit 3: Personal Hygiene & Patient Care Skills**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

- Bathing, Oral Care, Bed-Making
- Care of Elderly, Disabled, and Bedridden Patients
- Handwashing Techniques and Infection Control
- Pressure Sore Prevention

**Practical:**

- Demonstrate sponge bath, back care, changing linens
- Maintain hygiene log for a mock patient

### **30.1.4 Unit 4: Nutrition, Medication Support & First Aid**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Balanced Diet and Feeding Assistance
- Measuring Fluids and Dietary Restrictions
- Basic Knowledge of Oral Medication (No Injection)
- Simple First Aid: Cuts, Burns, Fainting

**Practical:**

- Feed patient using spoon/tube (simulation)
- Perform dressing of minor wound (demo)

### **30.1.5 Unit 5: Mobility, Safety & Waste Management**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Safe Lifting, Transferring & Assisting Mobility
- Use of Wheelchairs, Stretchers, Walkers
- Biomedical Waste Disposal (Color Code System)
- Emergency Procedures (CPR Overview – Demo Only)

**Practical:**

- Simulate transfer of a patient from bed to wheelchair
- Demonstrate waste segregation in bins

### 30.1.6 Unit 6: Community Health & Final Assessment

**Duration:** 20 Hours

- Basics of Hygiene Awareness in Rural/Urban Settings
- Immunization Schedule (Overview Only)
- Role in Epidemic Prevention (like COVID-19, Dengue)
- Field Visit Report or Poster Presentation
- Viva Voce + Practical Test

## 30.2 Assessment Pattern

Component	Weightage
Theory Examination	25%
Practical Performance	45%
Project/Viva/Presentation	30%

## 30.3 Certification Outcome

### **“Certified Health Care Worker (Level 3.5)”**

Job Roles:

- Patient Care Assistant
- Geriatric Care Attendant
- Clinic Helper
- Home Health Aide (under supervision)

## **31.0 Yoga & Wellness Trainer**

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Demonstration + Self-Practice)

**Outcome:** Trained in yoga practices, lifestyle guidance, and basic wellness techniques for individual and group sessions

## **31.1 Unit-Wise Syllabus Structure**

### **31.1.1 Unit 1: Introduction to Yoga & Wellness**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- History & Philosophy of Yoga (Patanjali's Yoga Sutras)
- Types of Yoga: Hatha, Raja, Bhakti, Karma
- Role of Yoga in Modern Wellness & Preventive Health
- Five Principles of Yoga (Breathing, Exercise, Relaxation, Diet, Thinking)

**Practical:**

- Group discussion and visualization of yoga traditions
- Create a daily yoga lifestyle schedule

### **31.1.2 Unit 2: Asanas (Postures) and Their Benefits**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

- Standing, Sitting, Supine, Prone, and Balancing Asanas
- Postures for Flexibility, Strength, Digestion, and Relaxation
- Contraindications and Modifications
- Warm-up & Cool-down Routines

**Practical:**

- Daily practice and demo of Surya Namaskar
- Asana practice logs (e.g., Tadasana, Trikonasana, Bhujangasana)

### **31.1.3 Unit 3: Pranayama & Breathwork Techniques**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Types of Pranayama: Anulom-Vilom, Bhastrika, Kapalbhati, Sheetal
- Breathing for Stress Relief & Focus
- Precautions and Proper Time for Practice

**Practical:**

- Lead and follow breathing sessions
- Maintain a pranayama practice journal

### **31.1.4 Unit 4: Meditation & Relaxation Practices**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Introduction to Meditation & Mindfulness
- Guided Meditation, Yoga Nidra, Om Chanting
- Managing Anxiety and Emotional Health through Mind-Body Awareness

**Practical:**

- Conduct a 10-minute guided meditation session
- Practice Yoga Nidra (Relaxation) daily

### **31.1.5 Unit 5: Diet, Lifestyle & Basic Anatomy**

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- Yogic Diet (Sativik, Rajsik, Tamsik)
- Digestive Health, Daily Routines, Detox
- Basic Anatomy of Respiratory, Digestive & Musculoskeletal Systems
- Introduction to Common Health Conditions Managed by Yoga

**Practical:**

- Prepare a basic yogic diet plan
- Role-play wellness counselling sessions

### **31.1.6 Unit 6: Training Practice, Assessment & Viva**

**Duration:** 20 Hours



- Plan and conduct a group yoga session (30 min)
- Prepare charts/posters for wellness workshops
- Maintain teaching log and feedback form
- Final Viva and Practical Test

## 31.2 Assessment Pattern

Component	Weightage
Theory Test	25%
Daily Practical Logs	30%
Final Demo & Viva	45%

## 31.3 Certification Outcome

**“Certified Yoga & Wellness Trainer (Level 3.5)”**

Career Opportunities:

- Yoga Assistant Instructor
- Wellness Program Facilitator
- Personal Yoga Coach (Beginner Level)
- Health Camp or School Yoga Trainer

## 32.0 Physiotherapy Assistant

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Lab Practice + Clinical Exposure)

**Outcome:** Skilled in supporting physiotherapy procedures, patient handling, and basic therapeutic exercises

## 32.1 Unit-Wise Syllabus Structure

Semester 1: Foundations of Physiotherapy & Human Anatomy

### 32.1.1 Unit 1: Introduction to Physiotherapy

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

- Role and Scope of Physiotherapy in Healthcare
- Role of Physiotherapy Assistant
- Ethics, Communication, and Patient Rights
- Safety Protocols in Therapy Centers

**Practical:**

- Demonstrate patient communication and safety procedures
- Perform sanitization of therapy tools

### 32.1.2 Unit 2: Basic Human Anatomy & Physiology

**Duration:** 50 Hours (Theory: 30 | Practical: 20)

- Skeletal and Muscular Systems
- Joints and Range of Motion
- Nervous, Circulatory, and Respiratory Systems
- Body Positions and Movement Terminology

**Practical:**

- Identify bones and muscles on models
- Measure joint movements (ROM exercises)

### **32.1.3 Unit 3: Physical Therapy Equipment & Handling Techniques**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

- Hot Packs, Infrared Lamps, TENS, Ultrasound
- Use of Exercise Balls, CPM Machines, Weights
- Cleaning and Maintenance of Equipment
- Transferring and Positioning Patients Safely

**Practical:**

- Operate hot pack unit and infrared lamp
- Assist in patient transfers using gait belts

Semester 2: Treatment Support & Clinical Practice

### **32.1.4 Unit 4: Therapeutic Exercises & Supportive Roles**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

- Active, Passive, and Resistive Exercises
- Breathing Exercises and Postural Training
- Support during Stretching, Strengthening, Mobilization
- Home Exercise Program Assistance

**Practical:**

- Assist in upper and lower limb exercise routines
- Monitor breathing and posture correction sessions

### **32.1.5 Unit 5: Rehabilitation for Common Conditions**

**Duration:** 60 Hours (Theory: 30 | Practical: 30)

- Stroke, Arthritis, Fracture Rehab, Parkinsonism
- Sports Injuries, Back Pain, Post-Surgical Rehab
- Use of Assistive Devices: Crutches, Walkers, Braces
- Recording Vital Parameters during Therapy

**Practical:**

- Demonstrate rehab assistance for a mock patient
- Practice assistive device usage and patient walking drills

### **32.1.6 Unit 6: Documentation, Project & Viva**

**Duration:** 40 Hours

- Maintain Therapy Charts and Patient Logs
- Sample SOAP Notes (Subjective, Objective, Assessment, Plan)
- Project: Assist in 5 mock treatment cases (logbook entry)
- Final Viva and Practical Demonstration

## **32.2 Assessment Format**

Component	Weightage
Theory Examination	25%
Practical Evaluation	45%
Project & Viva	30%

## 32.3 Certification Outcome

**“Certified Physiotherapy Assistant (Level 4.5)”**

Job Roles:

- Physiotherapy Clinic Assistant
- Rehab Technician
- Orthopedic OPD Support Staff
- Home Visit Therapy Assistant (under supervision)

## Design, Art, & Media

## 33.0 Fashion Design Basics

**Duration:** 1 Year

**NCRF Level:** 4

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Studio Practice + Portfolio)

**Outcome:** Skill-ready to assist in fashion design studios, boutiques, or start tailoring/designing independently



## 33.1 Unit-Wise Syllabus Structure

Semester 1: Foundation in Fashion, Sketching & Fabric Basics

### 33.1.1 Unit 1: Introduction to Fashion & Design Principles

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

- History and Evolution of Fashion
- Fashion Terminology and Trends
- Elements & Principles of Design (Line, Form, Color, Texture)
- Fashion Cycles and Forecasting (intro level)

**Practical:**

- Create fashion trend mood boards
- Identify types of silhouettes and garments

### 33.1.2 Unit 2: Fashion Illustration & Color Theory

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

- Drawing Basic Croquis (Human Figure Templates)
- Rendering Fabrics (Cotton, Denim, Silk)
- Color Wheel, Harmonies, Warm vs Cool Tones
- Flat Sketches & Stylized Outfits

**Practical:**

- Create portfolio pages of garment illustrations
- Color rendering of design collections

### **33.1.3 Unit 3: Textile Science & Fabric Study**

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

- Natural vs Synthetic Fibers (Cotton, Wool, Nylon, etc.)
- Fabric Structure: Woven, Knitted, Non-woven
- Fabric Identification, Draping Qualities, Uses
- Care Labels, Washing Instructions

**Practical:**

- Identify fabrics through touch and burn test
- Maintain a fabric swatch book

Semester 2: Garment Construction, Draping & Portfolio

### **33.1.4 Unit 4: Pattern Making & Garment Construction**

**Duration:** 60 Hours (Theory: 20 | Practical: 40)

- Tools and Equipment in a Sewing Lab
- Body Measurements and Basic Block Drafting
- Dart Manipulation, Seams, Plackets, Necklines
- Construction of Skirt, Kurti, and Blouse (basic level)

**Practical:**

- Draft and stitch a straight skirt and kurti
- Use sewing machine and finishing tools

### 33.1.5 Unit 5: Embellishments & Surface Ornamentation

**Duration:** 50 Hours (Theory: 15 | Practical: 35)

- Embroidery (Hand, Machine – intro level)
- Patchwork, Appliqué, Sequins, Beading
- Tie & Dye, Batik, Block Printing Basics
- Designing Motifs for Fabric Enhancement

**Practical:**

- Create a stitched sample with embroidery
- Design a dupatta with surface design techniques

### 33.1.6 Unit 6: Fashion Portfolio, Display & Viva

**Duration:** 40 Hours

- Compile Illustration & Construction Work
- Create a Mini Collection (3 Garment Concepts)
- Prepare and Present Final Portfolio
- Viva and Presentation with Product Display

## 33.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Evaluation	45%
Portfolio & Viva	30%

## 33.3 Certification Outcome

**“Certified Assistant in Fashion Design (Level 4)”**

Career Opportunities:

- Fashion Assistant
- Boutique Designer
- Tailoring Entrepreneur
- Apparel Illustrator or Assistant Merchandiser

## 34.0 Interior Decoration

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Design Practice + Site Visits)

**Outcome:** Skill-ready to assist with home, retail, and office interior styling and design tasks

## 34.1 Unit-Wise Curriculum Breakdown

### 34.1.1 Unit 1: Introduction to Interior Design & Principles

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Scope and Importance of Interior Decoration
- Basic Principles: Balance, Rhythm, Harmony, Proportion
- Types of Interiors: Residential, Commercial, Hospitality
- Career Paths in Interior Design

**Practical:**

- Identify and match examples of design principles in photos
- Prepare a chart showing types of interiors

### **34.1.2 Unit 2: Elements of Design & Color Theory**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Elements: Line, Form, Texture, Light, Color, Space
- The Color Wheel and Harmonies
- Mood Boards and Color Psychology
- Lighting Design: Ambient, Task, Accent

**Practical:**

- Create color palettes and room mood boards
- Demonstrate effect of lighting on color tones

### **34.1.3 Unit 3: Space Planning & Furniture Layouts**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Measuring and Drawing Scaled Floor Plans
- Space Functionality and Circulation
- Living Room, Bedroom, Kitchen, Office Layouts
- Furniture Arrangement Principles

**Practical:**

- Draft furniture layout for a 1BHK apartment



- Use cutouts or software to simulate room planning

#### **34.1.4 Unit 4: Materials, Finishes & Soft Furnishings**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Wall Finishes: Paint, Wallpaper, Panels
- Flooring: Tiles, Wood, Vinyl, Carpet
- Soft Furnishings: Curtains, Upholstery, Cushions
- Sustainable & Budget-Friendly Materials

**Practical:**

- Create a material board for a sample room
- Compare material swatches for functionality and aesthetics

#### **34.1.5 Unit 5: Accessories, Styling & Theme Decor**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Mirrors, Wall Art, Planters, Clocks, Rugs
- Themed Rooms: Minimalist, Rustic, Modern, Traditional
- Festive and Seasonal Styling
- Do-It-Yourself (DIY) Accessories

**Practical:**

- Style a table or corner using accessories
- Create a small DIY décor piece (wall hanging, lamp, etc.)

### 34.4.6 Unit 6: Mini Project & Viva

**Duration:** 30 Hours

- Develop a full décor plan for one residential space (with sketches, mood board, color palette, and material samples)
- Site Visit Report (showroom or design studio)
- Viva and Presentation of Final Project

### 34.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Exercises	40%
Project & Viva	35%

### 34.3 Certification Outcome

**“Certified Interior Decoration Assistant (Level 3.5)”**

Career Roles:

- Interior Styling Assistant
- Décor Consultant (Home Retail Stores)
- Showroom Stylist
- Freelance Home Organizer

## 35.0 Printing & Publishing Skills

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Software Practice + Press Demo)

**Outcome:** Skill-ready to assist in DTP, print setup, content formatting, and basic press operations

## 35.1 Unit-Wise Curriculum Breakdown

### 35.1.1 Unit 1: Introduction to Printing & Publishing

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Overview of Printing and Publishing Industry
- Types of Print Media: Books, Newspapers, Magazines, Flyers
- Roles in a Publishing House
- Print vs Digital Publishing (Basic Comparison)

**Practical:**

- Identify and categorize various print materials
- Visit a local printing press or newspaper office (if available)

### 35.1.2 Unit 2: Desktop Publishing (DTP) Basics

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

- Introduction to DTP Software (PageMaker, InDesign, CorelDRAW)
- Page Layouts: Margins, Columns, Bleeds, Master Pages
- Text Wrapping, Font Styles, Headings
- Inserting Images, Tables, and Shapes

**Practical:**

- Design a flyer and newsletter using DTP tools
- Format a sample page with text and images

### **35.1.3 Unit 3: Typography & Design Principles**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Typography Basics: Fonts, Families, Alignment, Readability
- Design Elements: Contrast, Repetition, Balance, Hierarchy
- Color Selection and Backgrounds
- Cover Page and Title Design

**Practical:**

- Design a book cover mockup
- Experiment with typography and spacing

### **35.1.4 Unit 4: Pre-Press & Printing Processes**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Understanding CMYK, RGB, and Resolution
- Pre-press: Proofing, Imposition, Plate Making
- Types of Printing: Offset, Digital, Flexo, Screen Printing
- Print Production Workflow

**Practical:**

- Simulate pre-press proofing for a small booklet

- Observe basic operations of a digital/offset press

### 35.1.5 Unit 5: Publishing Techniques & Content Workflow

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Manuscript to Final Layout
- Editing, Proofreading Basics
- ISBN & Copyright Registration (Overview)
- File Formats for Print: PDF, TIFF, EPS

**Practical:**

- Convert a raw document into a print-ready file
- Apply layout corrections based on proofreading

### 35.1.6 Unit 6: Project & Viva

**Duration:** 20 Hours

- Final Project: Design and prepare a booklet (4–6 pages) with cover, layout, and export for print
- Documentation of design process
- Viva and presentation of printed output

## 35.2 Assessment Format

Component	Weightage
Theory Test	25%
Practical Skills	45%



Project & Viva	30%
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## 35.3 Certification Outcome

**“Certified Assistant in Printing & Publishing (Level 3.5)”**

Career Roles:

- DTP Operator
- Print Production Assistant
- Publishing Assistant (Books/Newspapers)
- Print Layout Designer (Entry-Level)

## 36.0 Graphic Design

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Software Practical + Portfolio Development)

**Outcome:** Job-ready designer proficient in visual communication, digital artwork, and print/digital design tools

## 36.1 Unit-Wise Curriculum Breakdown

Semester 1: Design Principles, Drawing & Software Basics

### 36.1.1 Unit 1: Fundamentals of Graphic Design

**Duration:** 40 Hours (Theory: 25 | Practical: 15)

- What is Graphic Design?
- Elements: Line, Shape, Color, Texture, Space
- Principles: Balance, Contrast, Emphasis, Alignment, Repetition
- Types of Design: Print, Digital, Advertising, Editorial

**Practical:**

- Analyze examples of good and bad design
- Prepare design principle reference boards

### **36.1.2 Unit 2: Drawing & Concept Sketching**

**Duration:** 40 Hours (Theory: 15 | Practical: 25)

- Basic Freehand Drawing & Doodling
- Logo Sketching Techniques
- Thumbnail Sketches and Wireframes
- Storyboarding for Ads and Web

**Practical:**

- Create a rough logo sketch and digitalize it
- Sketch a storyboard for a 4-panel ad

### **36.1.3 Unit 3: Design Software – Adobe Photoshop & Illustrator**

**Duration:** 60 Hours (Theory: 20 | Practical: 40)

- Image Editing (Photoshop): Layers, Masks, Filters

- Vector Illustration (Illustrator): Shapes, Pen Tool, Pathfinder
- Typography & Text Effects
- Logo, Poster, and Banner Creation

**Practical:**

- Create social media post templates
- Design a brand logo using Illustrator

Semester 2: Branding, Layout & Portfolio Development

### **36.1.4 Unit 4: Branding & Visual Identity Design**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

- Brand Elements: Logo, Typography, Color Scheme
- Stationery Design: Business Card, Letterhead, Envelope
- Product Packaging (Basics)
- Mockup Presentation and Client Feedback

**Practical:**

- Design a mini brand kit (logo, card, letterhead)
- Present brand mockups using templates

### **36.1.5 Unit 5: Layout Design & Publishing**

**Duration:** 50 Hours (Theory: 20 | Practical: 30)

- Adobe InDesign / Canva Pro / CorelDRAW
- Grids, Margins, Columns, Bleed

- Magazine Covers, Brochures, Booklets
- Print Formats and Export for Press

**Practical:**

- Layout a 4-page brochure with images and text
- Export print-ready files in PDF format

### 36.1.6 Unit 6: Portfolio Building & Final Project

**Duration:** 40 Hours

- Compile Works: Posters, Logos, Layouts, Banners
- Document Design Process (Brief – Sketch – Final)
- Present a Live Project (Client or Simulated)
- Viva and Panel Review

## 36.2 Assessment Pattern

Component	Weightage
Theory Exams	20%
Software Practical	40%
Final Portfolio + Viva	40%

## 36.3 Certification Outcome

**“Certified Graphic Designer (Level 4.5)”**

Career Opportunities:

- Graphic Designer (Print/Digital)

- Logo & Branding Designer
- Illustrator
- Creative Assistant in Marketing/Publishing

## Other Trades

### 37.0 Plumbing Technician

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Workshop Tasks)

**Outcome:** Job-ready plumbing technician capable of installation, maintenance, and repair of plumbing systems

### 37.1 Unit-Wise Curriculum Breakdown

#### 37.1.1 Unit 1: Introduction to Plumbing & Tools

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Role and Importance of Plumbing in Construction
- Types of Plumbing Systems: Water Supply, Drainage, Sanitation
- Plumbing Tools: Spanners, Wrenches, Cutters, Pipe Benders
- Safety Equipment and Practices

**Practical:**



- Demonstrate use of hand tools for pipe work
- Identify types of plumbing fixtures and fittings

### **37.1.2 Unit 2: Pipes, Fittings & Materials**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Types of Pipes: PVC, CPVC, GI, PEX, Copper
- Pipe Fittings: Elbows, Tees, Unions, Valves, Traps
- Pipe Jointing Methods: Threaded, Solvent Weld, Compression
- Material Standards (IS Codes)

**Practical:**

- Cut, join and fit PVC and GI pipes
- Practice leak-proof joint assembly

### **37.1.3 Unit 3: Water Supply Systems**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Sources of Water Supply
- Plumbing Layouts for Homes and Apartments
- Overhead Tanks, Sump Tanks, Pumps, Valves
- Testing Water Pressure and Flow

**Practical:**

- Install basic water supply system for a model bathroom
- Measure water pressure and troubleshoot low flow

### **37.1.4 Unit 4: Drainage, Sanitation & Sewage Systems**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Drainage vs Sewage vs Rainwater Systems
- Traps, Vents, Inspection Chambers
- Anti-siphonage and Backflow Prevention
- Septic Tanks and Soak Pits (Introduction)

**Practical:**

- Lay out a model drainage system
- Connect and test a wash basin drain with trap

### **37.1.5 Unit 5: Plumbing Maintenance & Repair**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Leak Detection and Repair
- Replacing Taps, Valves, and Flush Tanks
- Desilting and Cleaning Pipes
- Emergency Shutoff Techniques

**Practical:**

- Simulate pipe leakage and repair
- Install and maintain a flush tank assembly

### **37.1.6 Unit 6: Project Work & Viva**

**Duration:** 30 Hours

- Develop a complete plumbing plan for a single room unit
- Submit layout diagram and materials list
- Final assessment of hands-on skills
- Viva and troubleshooting demo

## 37.2 Assessment Format

Component	Weightage
Theory Test	25%
Workshop Practice	45%
Final Project & Viva	30%

## 37.3 Certification Outcome

**“Certified Plumbing Technician (Level 3.5)”**

Career Roles:

- Assistant Plumber
- Construction Site Plumbing Helper
- Maintenance Technician in Apartments, Hotels, Hospitals
- Eligible for apprenticeship under licensed plumbers

## 38.0 Carpentry & Woodwork Basics

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Workshop-Based + Theory + Product Making)

**Outcome:** Competency in foundational carpentry, safe tool handling, and basic furniture assembly

## 38.1 Unit-Wise Curriculum Breakdown

### 38.1.1 Unit 1: Introduction to Carpentry & Safety Practices

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Importance and Applications of Carpentry
- Types of Carpentry: Construction, Furniture, Decorative
- Safety Gear: Gloves, Goggles, Apron, Ear Protection
- Workshop Safety Rules and First Aid

**Practical:**

- Demonstration of safety gear usage
- Create a safety checklist for a woodshop

### 38.1.2 Unit 2: Wood Types, Properties & Seasoning

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Hardwoods vs Softwoods (Teak, Sal, Pine, MDF, Plywood)
- Wood Defects and Moisture Content
- Seasoning Methods (Air, Kiln)
- Timber Storage and Preservation

**Practical:**

- Identify and compare wood samples
- Demonstrate wood cutting with hand saws

### **38.1.3 Unit 3: Tools, Equipment & Measurements**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Hand Tools: Saws, Chisels, Planes, Hammers, Clamps
- Power Tools (intro): Drill, Jigsaw, Sander
- Measuring & Marking: Tape, Square, Calipers
- Surface Preparation and Filing

**Practical:**

- Practice cutting, chiseling, and planing on scrap wood
- Assemble a tool kit and use measuring instruments

### **38.1.4 Unit 4: Joinery & Basic Construction Techniques**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Types of Joints: Butt, Lap, Dado, Mortise & Tenon
- Nailing, Screwing, Doweling Techniques
- Framework for Tables, Stools, and Shelves
- Use of Adhesives and Fasteners

**Practical:**

- Make sample joints on wood blocks



- Construct a small wooden frame or rack

### 38.1.5 Unit 5: Wood Finishing & Surface Treatments

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Sanding, Filling, Priming, Polishing
- Painting, Varnishing, Waxing
- Laminate and Veneer Application
- Care and Maintenance of Finished Products

**Practical:**

- Sand and polish a small wooden surface
- Apply varnish or paint using brush/roller

### 38.1.6 Unit 6: Mini Project & Viva

**Duration:** 30 Hours

- Final Project: Construct a small piece of furniture (e.g., stool, drawer box, wall shelf)
- Submit logbook with sketches, material list, and procedure
- Viva Voce with demonstration of tools used and safety knowledge

## 38.2 Assessment Format

Component	Weightage
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Theory Test	25%
Workshop Practice	45%
Final Project & Viva	30%

## 38.3 Certification Outcome

**“Certified Carpentry & Woodwork Assistant (Level 3.5)”**

Career Options:

- Assistant Carpenter
- Furniture Maker (Home/Modular)
- Workshop Assistant in Woodcraft Units
- Self-employed Woodwork Technician

## 39.0 Beauty & Personal Care

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Studio Training + Grooming Projects)

**Outcome:** Certified professional in basic beauty services, client handling, and personal grooming

## 39.1 Unit-Wise Curriculum Breakdown

### 39.1.1 Unit 1: Introduction to Beauty Therapy & Hygiene

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Scope of Beauty & Wellness Industry
- Personal Presentation and Grooming for Professionals
- Salon Hygiene & Disinfection Practices
- Tools & Equipment Identification

**Practical:**

- Demonstrate use and sanitation of basic salon tools
- Prepare a personal grooming checklist

### **39.1.2 Unit 2: Skin Care & Facial Treatments**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Skin Structure, Types & Conditions
- Cleansing, Toning, Moisturizing Techniques
- Basic Facials: Fruit, Herbal, Cleanup
- Face Packs and Masks

**Practical:**

- Perform a basic skin analysis
- Demonstrate a full facial treatment routine

### **39.1.3 Unit 3: Hair Care & Styling Techniques**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Hair Types, Scalp Conditions, Hair Problems

- Hair Wash & Conditioning
- Blow Drying, Basic Styling (Braids, Buns, Curls)
- Temporary Hair Straightening & Ironing

**Practical:**

- Practice shampooing and conditioning on models
- Style 2–3 basic hairstyles

### **39.1.4 Unit 4: Basic Makeup Application**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Types of Makeup: Day, Party, Bridal (Intro Only)
- Tools: Brushes, Sponges, Applicators
- Foundation, Eye, Lip, and Blush Application
- Color Theory for Makeup

**Practical:**

- Practice light day makeup and party look on models
- Maintain hygiene in brush and tool handling

### **39.1.5 Unit 5: Hand, Feet & Personal Grooming**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Manicure and Pedicure Techniques
- Nail Shapes, Filing, Cuticle Care
- Threading, Waxing (Arms/Legs), Bleaching Basics

- Deodorants, Perfume, and Personal Etiquette

**Practical:**

- Perform threading on eyebrows and upper lips
- Demonstrate manicure or pedicure with massage

### 39.1.6 Unit 6: Project, Client Handling & Viva

**Duration:** 30 Hours

- Prepare 2 complete service packages (Facial + Hair + Grooming)
- Demonstrate full service on clients (real or mock)
- Viva Voce with presentation of grooming kit
- Logbook of clients, services, and feedback

## 39.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Skills Test	45%
Client Project & Viva	30%

## 39.3 Certification Outcome

**“Certified Beauty & Personal Care Assistant (Level 3.5)”**

Career Opportunities:

- Salon Assistant
- Beauty & Grooming Freelancer



- Home Service Beauty Consultant
- Entry-Level Spa Technician or Bridal Assistant

## 40.0 Solar Installation & Repair Technician

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Field Simulations)

**Outcome:** Certified technician skilled in solar panel setup, system wiring, maintenance, and basic repairs

### 40.1 Unit-Wise Curriculum Breakdown

#### 40.1.1 Unit 1: Introduction to Solar Energy

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Basics of Renewable Energy & Solar Power
- Solar Energy Potential in India
- Solar PV vs Solar Thermal
- Components of a Solar PV System

**Practical:**

- Identify solar system components (panels, inverter, battery)
- Visit to rooftop solar or training model system

### **40.1.2 Unit 2: Types of Solar PV Systems**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Off-Grid, On-Grid & Hybrid Systems
- Net Metering Overview
- DC and AC Power Basics
- Solar Panel Ratings & Performance Metrics

**Practical:**

- Differentiate between off-grid and on-grid systems
- Read nameplates and match PV specs

### **40.1.3 Unit 3: Installation Tools & Safety Practices**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Basic Tools: Spanners, Multimeter, Crimping Tool, Drill
- Safety Gear: Gloves, Helmets, Insulated Footwear
- Electrical Safety, Fire Hazards, First Aid
- Safe Handling of Batteries and Live Circuits

**Practical:**

- Demonstrate safe handling of panels and tools
- Install dummy panel on a mounting structure

### **40.1.4 Unit 4: Solar Panel Mounting & Electrical Wiring**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Mounting Structures: Types & Orientations
- Tilt Angle and Direction Based on Location
- Connecting Solar Panels (Series & Parallel)
- Wiring to Charge Controller, Inverter, Battery

**Practical:**

- Mount solar panels on simulated rooftop stand
- Perform electrical wiring for a small off-grid system

#### **40.1.5 Unit 5: Battery, Inverter & System Maintenance**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Battery Types (Lead-Acid, Lithium-ion), Charging Cycles
- Inverter Operation & Output Monitoring
- Troubleshooting Panel, Wiring, or Output Issues
- Cleaning & Maintenance of Solar Panels

**Practical:**

- Connect batteries and check voltage levels
- Clean and inspect a solar panel setup

#### **40.1.6 Unit 6: Project, Assessment & Viva**

**Duration:** 30 Hours

- Prepare and install a working demo solar kit
- Submit maintenance logbook and fault-finding checklist

- Present a mock installation plan
- Viva and Final Skill Test

## 40.2 Assessment Format

Component	Weightage
Theory Examination	25%
Practical Tasks	45%
Project & Viva	30%

## 40.3 Certification Outcome

**“Certified Solar Installation & Repair Technician (Level 3.5)”**

Career Opportunities:

- Solar Technician (Rural/Urban Installations)
- Rooftop Solar Installer
- Solar System Maintenance Worker
- Solar Startup Entrepreneur / Franchise Operator

## 41.0 Renewable Energy Systems

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical + Field Simulations)

**Outcome:** Skill-ready to support installation, maintenance, and evaluation of renewable energy systems for residential and small industrial use

## 41.1 Unit-Wise Curriculum Breakdown

Semester 1: Fundamentals of Energy & Solar Technology

### 41.1.1 Unit 1: Introduction to Renewable Energy

**Duration:** 40 Hours (Theory: 30 | Practical: 10)

- Energy Basics: Units, Forms, Conversion
- Conventional vs Non-Conventional Sources
- Global and Indian Energy Scenario
- Introduction to Renewable Energy Technologies

**Practical:**

- Identify different energy system models
- Visit a renewable energy awareness center (virtual/physical)

### 41.1.2 Unit 2: Solar Energy Systems

**Duration:** 60 Hours (Theory: 30 | Practical: 30)

- Types: Solar PV and Solar Thermal
- Components: Panels, Inverters, Batteries, Mounts
- Solar Home Lighting Systems and Solar Water Heating
- Performance Metrics and Basic Troubleshooting

**Practical:**



- Assemble a basic solar PV kit
- Install and test a solar water heater or lighting kit

### **41.1.3 Unit 3: Tools, Safety, and System Layouts**

**Duration:** 40 Hours (Theory: 20 | Practical: 20)

- Tools and Meters: Multimeter, Clamp Meter, Thermometer
- Electrical Safety and PPE
- Drawing Basic Layouts for Solar and Wind Systems
- Basic Load Calculations

**Practical:**

- Use of safety equipment and measuring devices
- Create simple system layout plans (solar + wind combo)

Semester 2: Wind, Bio & Hybrid Systems + Project

### **41.1.4 Unit 4: Wind Energy Systems**

**Duration:** 50 Hours (Theory: 25 | Practical: 25)

- Wind Power Principles and Site Selection
- Wind Turbine Types and Components
- Small-Scale Wind System Installation
- Grid Integration (Introductory)

**Practical:**

- Assemble a small wind energy demonstration model

- Monitor wind speed using an anemometer

### 41.1.5 Unit 5: Biomass, Hydro, and Hybrid Systems

**Duration:** 60 Hours (Theory: 30 | Practical: 30)

- Biomass: Briquettes, Biogas Plant Basics
- Micro-Hydro Systems: Water Wheels and Turbines
- Hybrid Systems: Solar-Wind, Solar-Diesel
- Storage Solutions: Batteries and Smart Grids

**Practical:**

- Model setup of a small biogas digester
- Demonstrate hybrid solar-wind charging system

### 41.1.6 Unit 6: Project Work & Sustainability Practices

**Duration:** 50 Hours

- Develop a renewable energy solution for a community (e.g., solar lights, clean cooking)
- Create awareness materials: posters, handouts, digital designs
- Maintain a learning diary, system logbook, and project report
- Final Practical Demonstration and Viva

## 41.2 Assessment Pattern

Component	Weightage
Theory Test	25%

Practical & System Work	45%
Final Project & Viva	30%

## 41.3 Certification Outcome

**“Certified Technician in Renewable Energy Systems (Level 4.5)”**

Career Opportunities:

- Renewable Energy Technician (Field/Installation)
- Solar-Wind System Installer
- Green Energy Entrepreneur
- CSR or NGO Field Worker in Sustainability Projects

## 42.0 Medical Lab Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical)

**Outcome:** Basic skills in sample collection, assisting in tests, handling equipment

### 42.1 Unit-wise Syllabus

#### 42.1.1 Unit 1: Introduction to Medical Laboratory Science

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Role of Lab Assistant

- Laboratory Setup and Safety
- Biomedical Waste Disposal
- Lab Ethics and Hygiene

### **42.1.2 Unit 2: Blood Collection Techniques**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Basics of Blood Composition
- Sample Collection: Capillary & Venous
- Anticoagulants and Labeling
- Safety Precautions in Handling Blood

### **42.1.3 Unit 3: Hematology Basics**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Hemoglobin Estimation
- RBC, WBC, Platelet Count (Intro)
- Blood Grouping & Cross Matching (Demo Only)

### **42.1.4 Unit 4: Routine Urine & Stool Examination**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Physical and Chemical Examination of Urine
- Detection of Sugar, Albumin, Ketones
- Stool Analysis (Intro Level)

### 42.1.5 Unit 5: Lab Equipment Handling

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Microscope Parts and Basic Use
- Centrifuge, Colorimeter, Water Bath
- Daily Maintenance and Calibration Basics

### 42.1.6 Unit 6: Project Work and Viva

**Duration:** 30 Hours

- Field Visit to Diagnostic Lab
- Sample Test Record Preparation
- Final Skill Test + Viva

## 42.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Test	50%
Project + Viva	20%

## 42.3 Certification Outcome for 6 Months:

**“Certified Basic Medical Lab Assistant (Level 3.5)”**

Career Options:

- Lab Attendant
- Blood Sample Collector



- Pathology Lab Helper

## 43.0 Medical Lab Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Detailed Practical + Internship)

**Outcome:** Skilled in assisting pathologists with basic reporting, documentation, and diagnostics

### 43.1 Unit-wise Syllabus

Semester 1: Basic Medical Laboratory Techniques

#### 43.1.1 Unit 1: Laboratory Safety, Hygiene & Ethics

**Duration:** 40 Hours

- Lab Design and Workflow
- Infection Control & First Aid
- Safety Data Sheets (SDS)

#### 43.1.2 Unit 2: Blood Collection and Processing

**Duration:** 50 Hours

- Capillary, Venipuncture, Arterial Sampling (Intro)
- Handling Vacutainers and Syringes

- Centrifugation and Serum/Plasma Separation

### **43.1.3 Unit 3: Hematology Investigations**

**Duration:** 50 Hours

- Complete Blood Count (CBC) Basics
- ESR, PCV, BT, CT Tests
- Blood Smear Preparation and Staining

## **Semester 2: Clinical Pathology and Laboratory Practice**

### **43.1.4 Unit 4: Clinical Biochemistry**

**Duration:** 50 Hours

- Blood Sugar, Cholesterol, Urea, Creatinine Testing
- Liver and Renal Function Tests (Intro)
- Introduction to Autoanalyzers

### **43.1.5 Unit 5: Urine, Stool, and Body Fluids Examination**

**Duration:** 50 Hours

- Microscopic Analysis: Casts, Crystals, Cells
- Chemical Tests for Urine Proteins, Sugar, Bile Pigments
- Collection and Handling of CSF, Pleural, Ascitic Fluids

### **43.1.6 Unit 6: Microbiology (Intro Level)**

**Duration:** 40 Hours

- Collection of Swabs, Sputum, Urine for Culture
- Gram Staining, Ziehl-Neelsen (Demo)
- Hand Hygiene and Aseptic Techniques

#### **43.1.7 Unit 7: Internship/Project Work & Viva**

**Duration:** 30 Hours

- Diagnostic Lab / Hospital Lab Internship (1 Month Recommended)
- Work Diary / Logbook Submission
- Viva-voce Examination and Practical Demonstration

### **43.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skill Test	45%
Internship Project & Viva	30%

### **43.3 Certification Outcome for 1 Year:**

**“Certified Medical Laboratory Technician Assistant (Level 4.5)”**

Career Options:

- Pathology Lab Technician Assistant
- Diagnostic Centre Assistant
- Clinical Sample Handling Technician

## 44.0 Pharmacy Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Lab + Internship Visit)

**Outcome:** Basic skills in handling medicines, inventory, prescriptions

### 44.1 Unit-wise Syllabus

#### 44.1.1 Unit 1: Introduction to Pharmacy & Healthcare

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- History of Pharmacy
- Role of Pharmacy Assistant
- Types of Pharmacies (Retail, Hospital, Wholesale)
- Introduction to Drugs and Dosage Forms

#### 44.1.2 Unit 2: Common Medicines & Classification

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- OTC (Over-the-Counter) vs Prescription Drugs
- Antibiotics, Painkillers, Vitamins, Antiseptics

- Routes of Drug Administration (Oral, Topical, Injectable)

### **44.1.3 Unit 3: Prescription Handling & Labeling**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Reading Prescriptions (Rx Terminology)
- Understanding Abbreviations and Dosages
- Medicine Labeling: Name, Dosage, Expiry Date, Storage

### **44.1.4 Unit 4: Pharmacy Operations & Billing**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Stock Management Basics
- Billing Software Introduction
- Cash Management & Customer Service Basics

### **44.1.5 Unit 5: Basic Pharmacy Ethics and Laws**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Confidentiality & Record Keeping
- Introduction to Schedule H, X Drugs (Awareness)
- Role of Pharmacy Council and Drug Control Authorities

### **44.1.6 Unit 6: Mini Project & Viva**

**Duration:** 30 Hours



- Simulated Drug Store Setup
- Logbook Maintenance (Inventory + Sales)
- Final Viva and Practical Test

## 44.2 Assessment for 6-Month Course

Component	Weightage
Theory Test	30%
Practical Assignment	50%
Mini Project & Viva	20%

## 44.3 Certification Outcome for 6 Months:

**“Certified Pharmacy Sales Assistant (Level 3.5)”**

Career Opportunities:

- Pharmacy Sales Assistant
- Medical Store Billing Clerk
- OTC Product Advisor

## 45.0 Pharmacy Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Practical + Community Internship)

**Outcome:** Assistant capable of managing pharmacy operations, customer interaction, and medication support

## 45.1 Unit-wise Syllabus

Semester 1: Basic Pharmacy Operations

### 45.1.1 Unit 1: Pharmacy Fundamentals and Healthcare Systems

**Duration:** 40 Hours

- Introduction to Drug Development
- Healthcare System and Pharmacy Link
- Pharmacopoeia and Quality Standards

### 45.1.2 Unit 2: Drug Classification and Storage

**Duration:** 50 Hours

- Drug Categories: Antipyretics, Antacids, Antiseptics, Antibiotics
- Temperature-Sensitive Medicines (Cold Chain)
- Expiry Date Handling and Return to Supplier

### 45.1.3 Unit 3: Pharmacology Basics

**Duration:** 50 Hours

- Basic Pharmacodynamics and Pharmacokinetics (Intro)
- Side Effects, Adverse Reactions Awareness
- Patient Education on Drug Use

Semester 2: Advanced Pharmacy Practice

#### **45.1.4 Unit 4: Pharmacy Retail Management**

**Duration:** 50 Hours

- Drug Inventory Management and Stock Register
- GST in Pharmacy Billing
- Dealing with Medical Representatives (MR)

#### **45.1.5 Unit 5: Drug Regulations & Patient Safety**

**Duration:** 50 Hours

- Drugs and Cosmetics Act Overview
- NDPS Act (Intro) and Schedule H, X, G Drugs
- Pharmacovigilance and Adverse Event Reporting Basics

#### **45.1.6 Unit 6: Internship, Project & Viva**

**Duration:** 40 Hours

- Internship at Pharmacy Store / Hospital Pharmacy
- Prescription Audit and Stock Audit Assignment
- Project Report Submission
- Final Viva and Practical Test

### **45.2 Assessment for 1-Year Course**

Component	Weightage
Theory Examination	25%

Practical Skill Test	45%
Internship & Viva	30%

### 45.3 Certification Outcome for 1 Year:

**“Certified Pharmacy Operations Assistant (Level 4.5)”**

Career Opportunities:

- Pharmacy Billing Operator
- Hospital Pharmacy Store Assistant
- Retail Medical Store Manager (Entry Level)
- Community Pharmacy Worker

## 46.0 Radiology & Imaging Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Simulation)

**Outcome:** Basic assistance skills in X-ray procedures, patient preparation, and equipment handling

### 46.1 Unit-wise Syllabus

#### 46.1.1 Unit 1: Introduction to Radiology & Imaging

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Overview of Radiology (X-ray, Ultrasound, CT, MRI)
- Role of Imaging in Diagnosis
- Responsibilities of Radiology Assistants
- Basic Radiation Awareness

### **46.1.2 Unit 2: Human Anatomy for Imaging**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Skeletal System: Bones and Joints
- Major Organs: Heart, Lungs, Kidneys, Liver
- Understanding Anatomical Positioning for Imaging

### **46.1.3 Unit 3: Basics of X-ray Machine Operation**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Parts of an X-ray Machine
- Preparing Equipment and Cassettes
- Film Loading, Unloading and Processing (Analog and Digital)

### **46.1.4 Unit 4: Patient Preparation & Positioning**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Communicating with Patients
- Preparing for Chest, Limb, Abdomen X-rays
- Use of Lead Apron, Gonad Shields

### **46.1.5 Unit 5: Radiation Safety & Infection Control**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- ALARA Principle (As Low As Reasonably Achievable)
- Radiation Signs, Monitoring Badges
- Sanitization of Equipment and Rooms

### **46.1.6 Unit 6: Mini Project & Viva**



**Duration:** 30 Hours

- Simulated Positioning Practice
- Preparation of Patient Handling Record
- Final Viva and Skill Test

## 46.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

## 46.3 Certification Outcome for 6 Months:

**“Certified Radiology Assistant (Level 3.5)”**

Career Opportunities:

- X-ray Lab Assistant
- Imaging Department Helper
- Patient Preparation Technician

## 47.0 Radiology & Imaging Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Clinical Exposure + Internship)

**Outcome:** Assistant skilled in imaging operations, patient support, and preliminary quality checks

## 47.1 Unit-wise Syllabus

Semester 1: Imaging Basics and Patient Care

### 47.1.1 Unit 1: Introduction to Radiologic Technology

**Duration:** 40 Hours

- History of Radiology
- Types of Imaging Modalities
- Ethical and Legal Responsibilities

### 47.1.2 Unit 2: Medical Terminology and Basic Anatomy

**Duration:** 50 Hours

- Terminologies in Radiology Reports
- Systems: Skeletal, Respiratory, Digestive, Nervous
- Anatomy-based Positioning Landmarks

### 47.1.3 Unit 3: X-ray Machine Setup & Maintenance

**Duration:** 50 Hours

- X-ray Tube Functionality
- Generators, Control Panel Basics
- Equipment Calibration and Minor Maintenance

Semester 2: Advanced Procedures and Field Work

### 47.1.4 Unit 4: Radiographic Techniques & Patient Safety

**Duration:** 60 Hours

- Standard Imaging Views (PA, AP, Lateral, Oblique)
- Pediatric, Geriatric, and Emergency Patient Imaging
- Use of Grids and Collimators

### **47.1.5 Unit 5: Radiation Protection & Quality Assurance**

**Duration:** 50 Hours

- Radiation Exposure Limits (Public, Occupational)
- Personal Dosimetry Badge Handling
- Quality Control in Imaging: Artifacts, Retakes

### **47.1.6 Unit 6: Internship, Project Work & Viva**

**Duration:** 40 Hours

- Clinical Internship in Radiology Department (Hospital/Clinic)
- Document Cases Handled and Techniques Used
- Final Viva and Practical Skill Test

## **47.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skill Test	45%
Internship + Viva	30%

## **47.3 Certification Outcome for 1 Year:**

**“Certified Radiology & Imaging Assistant (Level 4.5)”**

Career Opportunities:

- Radiology Lab Assistant
- X-ray Department Support Staff
- Imaging Center Frontline Technician

# 48.0 Physiotherapy Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Clinic Simulation)

**Outcome:** Basic competency in assisting physiotherapists with exercises, mobility, and patient care

## 48.1 Unit-wise Syllabus

### 48.1.1 Unit 1: Introduction to Physiotherapy and Ethics

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Role of Physiotherapy in Healthcare
- Scope and Duties of a Physiotherapy Assistant
- Professional Ethics and Patient Confidentiality
- Safety Measures in Therapy Centers

### 48.1.2 Unit 2: Basic Human Anatomy & Movement

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Skeletal System Basics
- Major Muscle Groups
- Body Movements: Flexion, Extension, Rotation
- Posture Awareness

### 48.1.3 Unit 3: Assisting in Physical Therapy Exercises

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Passive and Active Range of Motion (ROM)
- Stretching and Strengthening Exercises
- Mobility Aids: Walkers, Crutches, Canes
- Safe Transfer Techniques (Bed to Chair, Wheelchair)

#### **48.1.4 Unit 4: Patient Care and Observation**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Monitoring Vitals (Pulse, BP, Respiration)
- Identifying Risks (Fall, Fatigue)
- Assisting Elderly and Post-operative Patients
- Maintaining Therapy Equipment Cleanliness

#### **48.1.5 Unit 5: Therapy Equipment Handling Basics**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Infrared Lamps, Hot Packs, TENS (Intro only)
- Storage, Maintenance, and Cleaning of Equipment
- Safety Checks before Use

#### **48.1.6 Unit 6: Project & Viva**

**Duration:** 30 Hours

- Simulated Therapy Sessions (Mock Patients)
- Prepare Patient Progress Report
- Final Viva & Practical Demonstration

### **48.2 Assessment for 6-Month Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skill Test	45%
Internship + Viva	30%



## 48.3 Certification Outcome for 6 Months:

**“Certified Basic Physiotherapy Assistant (Level 3.5)”**

Career Opportunities:

- Clinic Physiotherapy Helper
- Rehabilitation Support Staff
- Elder Care Assistant

## 49.0 Physiotherapy Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Detailed Practical + Internship)

**Outcome:** Skilled in assisting therapists during treatment, handling equipment, and monitoring patient recovery

### 49.1 Unit-wise Syllabus

Semester 1: Core Concepts and Practical Training

#### 49.1.1 Unit 1: Introduction to Rehabilitation Sciences

**Duration:** 40 Hours

- Overview of Physiotherapy Modalities
- Teamwork in Rehabilitation Centers
- Code of Conduct and Legal Aspects

### **49.1.2 Unit 2: Anatomy, Physiology & Biomechanics**

**Duration:** 50 Hours

- Structure of Bones, Muscles, Joints
- Cardiovascular and Respiratory System (Intro)
- Biomechanical Concepts (Posture, Balance, Gait)

### **49.1.3 Unit 3: Therapy Techniques and Exercise Programs**

**Duration:** 50 Hours

- Therapeutic Exercises: Strengthening, Endurance, Flexibility
- Neurorehabilitation Basics: Stroke, Paralysis Care
- Pediatric and Geriatric Therapy Introduction

Semester 2: Specialized Skills and Field Exposure

### **49.1.4 Unit 4: Physical Agents and Electrotherapy (Basic)**

**Duration:** 50 Hours

- Hot Pack, Cold Pack, Wax Therapy
- Introduction to TENS, Ultrasound Therapy
- Application Safety Measures

### **49.1.5 Unit 5: Patient Mobility & Assistive Technology**

**Duration:** 50 Hours

- Gait Training with Assistive Devices
- Prosthetics and Orthotics Introduction
- Fall Prevention Techniques

### **49.1.6 Unit 6: Internship, Project & Viva**

**Duration:** 40 Hours

- 1 Month Clinical Internship (Clinic/Rehab Center)
- Patient Case Studies (Minimum 5)

- Final Practical Demonstration and Viva

## 49.2 Assessment for 1-Year Course

Component	Weightage
Theory Examination	25%
Practical Skill Test	45%
Internship + Viva	30%

## 49.3 Certification Outcome for 1 Year:

**“Certified Physiotherapy Assistant (Level 4.5)”**

Career Opportunities:

- Physiotherapy Assistant in Hospitals/Clinics
- Rehabilitation Centre Support Staff
- Orthopedic Ward Assistant
- Home-Based Therapy Aide

# 50.0 Operation Theatre (OT) Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Simulation + Hospital Visit)

**Outcome:** Basic skills in assisting surgery rooms, equipment sterilization, and patient prep

## 50.1 Unit-wise Syllabus

### 50.1.1 Unit 1: Introduction to Operation Theatre Setup

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- What is an OT Assistant?
- Layout of an Operation Theatre
- Different Types of OTs (General, Orthopedic, Cardiac)
- Importance of Aseptic Environment

### 50.1.2 Unit 2: Surgical Instruments & Equipment Basics

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Types of Surgical Instruments: Cutting, Grasping, Retracting
- Name and Use of Basic Equipment: Suction Machine, Cautery Machine
- Sterilization and Disinfection (Manual/Autoclave)

### 50.1.3 Unit 3: Pre-Operation Procedures

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Preparing the Operation Table
- Draping and Instrument Trolley Setup
- Assisting in Patient Positioning

#### 50.1.4 Unit 4: Infection Control & Biomedical Waste Management

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Standard Precautions in OT
- PPE Usage (Gloves, Mask, Apron, Cap)
- Waste Segregation (Color-Coding)

#### 50.1.5 Unit 5: Post-Operation Procedures

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Instrument Cleaning and Sterilization
- Patient Transfer from OT to Recovery Room
- Maintenance of OT Logs and Checklists

#### 50.1.6 Unit 6: Mini Project & Viva

**Duration:** 30 Hours

- Set up a mock OT Room
- Sterilization Cycle Demo
- Final Viva and Skill Assessment

#### 50.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%



Mini Project & Viva	20%
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## 50.3 Certification Outcome for 6

### Months:

**“Certified OT Assistant (Basic Level) (Level 3.5)”**

Career Opportunities:

- OT Helper in Hospitals
- Assistant to Surgical Nurses
- Daycare Clinic Surgery Support

## 51.0 Operation Theatre (OT) Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Detailed Theory + Clinical Posting)

**Outcome:** Advanced skills in OT preparation, instrument handling, assisting surgeries, and sterilization management

### 51.1 Unit-wise Syllabus

Semester 1: Core Concepts and OT Preparations

#### 51.1.1 Unit 1: Introduction to Surgery and Hospital Environment

**Duration:** 40 Hours

- Roles of OT Assistant, Nurse, Surgeon, Anesthetist

- Hospital Departments and Patient Flow

### **51.1.2 Unit 2: Surgical Instruments and Handling Techniques**

**Duration:** 50 Hours

- Identification of Basic and Specialized Surgical Instruments
- Handling Sharp Instruments Safely
- Trolley Preparation for Minor and Major Surgeries

### **51.1.3 Unit 3: Aseptic Techniques and Infection Control**

**Duration:** 50 Hours

- Handwashing, Gowning, Gloving Techniques
- Aseptic Barriers, Scrubbing Techniques
- Handling Sterile Drapes and Supplies

Semester 2: Advanced OT Assistance & Clinical Work

### **51.1.4 Unit 4: Anesthesia Basics and Patient Monitoring**

**Duration:** 50 Hours

- Types of Anesthesia (Local, Regional, General)
- Assisting the Anesthetist
- Monitoring Vitals and Reporting Abnormalities

### **51.1.5 Unit 5: Specialized Surgery Assisting**

**Duration:** 60 Hours

- Orthopedic, Obstetric, ENT, and Eye Surgeries (Intro)
- Emergency Procedures Setup (Code Blue Drills)
- Care of Implants and Prosthetic Materials

### **51.1.6 Unit 6: Clinical Internship, Project & Viva**

**Duration:** 40 Hours

- Minimum 1 Month Posting in OT (Hospital/Clinic)
- Prepare Surgery Setup Reports (5+ Different Procedures)
- Final Clinical Skill Test and Viva

## **51.2 Assessment for 1-Year Course**

Component	Weightage
Theory Examination	25%
Practical Assessment	45%
Internship Project & Viva	30%

## **51.3 Certification Outcome for 1 Year:**

**“Certified Operation Theatre Technician Assistant (Level 4.5)”**

Career Opportunities:

- Operation Theatre Technician Assistant
- OT Support in Government and Private Hospitals
- Emergency Surgery Assistant

- Minor Surgery Unit Technician

## 52.0 Nursing Care Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Simulation)

**Outcome:** Basic competency in patient care, hygiene, feeding, and vital sign monitoring

### 52.1 Unit-wise Syllabus

#### 52.1.1 Unit 1: Introduction to Healthcare and Nursing Assistance

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Healthcare System Overview
- Roles and Responsibilities of a Nursing Care Assistant
- Professional Ethics, Communication, and Confidentiality

#### 52.1.2 Unit 2: Personal Hygiene and Basic Patient Care

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Bathing, Grooming, Dressing Assistance
- Oral Care, Hair Care, Nail Care

- Care of Bedridden and Elderly Patients

### **52.1.3 Unit 3: Feeding and Nutritional Care**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Types of Diets: Normal, Soft, Liquid
- Assisting in Feeding (Spoon, Tube Feeding Basics)
- Measuring Food and Fluid Intake

### **52.1.4 Unit 4: Vital Signs Monitoring**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Checking Pulse, Temperature, Respiration, Blood Pressure
- Recording and Reporting Readings
- Recognizing Abnormalities

### **52.1.5 Unit 5: Mobility Assistance and Patient Positioning**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Assisting in Walking, Wheelchair Transfers
- Positioning in Bed to Prevent Bed Sores
- Safe Lifting and Movement Techniques

### **52.1.6 Unit 6: Project Work & Viva**

**Duration:** 30 Hours



- Maintain a patient care logbook
- Simulated Nursing Care Scenarios
- Final Viva and Skill Demonstration

## 52.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

## 52.3 Certification Outcome for 6 Months:

**“Certified Basic Nursing Care Assistant (Level 3.5)”**

Career Opportunities:

- Hospital Patient Care Attendant
- Old Age Home Nursing Helper
- Clinic/Dispensary Assistant

## 53.0 Nursing Care Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Detailed Theory + Practical + Internship)

**Outcome:** Advanced skills in clinical nursing care, patient monitoring, and health documentation

## 53.1 Unit-wise Syllabus

Semester 1: Fundamentals of Nursing Assistance

### 53.1.1 Unit 1: Nursing Fundamentals and Patient Rights

**Duration:** 40 Hours

- Principles of Basic Nursing
- Rights and Responsibilities of Patients
- Legal and Ethical Aspects

### 53.1.2 Unit 2: Basic Anatomy and Physiology

**Duration:** 50 Hours

- Overview of Major Body Systems
- Normal Functions and Common Disorders
- Impact on Nursing Care

### 53.1.3 Unit 3: Patient Hygiene, Comfort, and Daily Care

**Duration:** 50 Hours

- Bed Bath, Oral Hygiene, Hair Care
- Catheter Care and Perineal Hygiene
- Pressure Sore Prevention and Bed Making

Semester 2: Advanced Patient Support and Clinical Exposure

#### **53.1.4 Unit 4: Vital Signs, Recordkeeping, and Basic Emergency Care**

**Duration:** 50 Hours

- Monitoring and Recording Vitals
- Documentation of Observations
- Introduction to Basic First Aid and CPR (demo)

#### **53.1.5 Unit 5: Nutrition, Medication Support, and Infection Control**

**Duration:** 50 Hours

- Assisting in Meal Planning and Feeding
- Medication Handling Awareness (No Drug Administration)
- Infection Control Procedures and Hand Hygiene

#### **53.1.6 Unit 6: Clinical Internship, Project & Viva**

**Duration:** 40 Hours

- Internship in Hospital or Health Centre
- Assist in Nursing Activities (Observation + Logbook)
- Final Practical Demonstration and Viva

### **53.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skills Test	45%

Internship + Viva	30%
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### 53.3 Certification Outcome for 1 Year:

**“Certified Nursing Care Assistant (Level 4.5)”**

Career Opportunities:

- Nursing Assistant in Hospitals/Clinics
- Home Healthcare Aide
- Rehabilitation Center Attendant
- Elderly Care Support Staff

## 54.0 Emergency Medical First Responder (EMFR) Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Simulation + Field Training)

**Outcome:** Basic competency in first response care, CPR, patient handling, and scene management

### 54.1 Unit-wise Syllabus

#### 54.1.1 Unit 1: Introduction to Emergency Medical Response

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Definition and Scope of Emergency Care
- Role of First Responder vs Paramedic
- Emergency Medical Services (EMS) System Structure

### **54.1.2 Unit 2: Patient Assessment Basics**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Primary Survey: Airway, Breathing, Circulation (ABC)
- Secondary Survey: Head-to-Toe Assessment
- Taking Basic Vitals (Pulse, BP, Respiratory Rate)

### **54.1.3 Unit 3: Basic Life Support (BLS) & CPR**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Introduction to CPR (Adults, Children, Infants)
- Chest Compressions and Rescue Breaths
- AED (Automated External Defibrillator) Basics

### **54.1.4 Unit 4: First Aid for Common Emergencies**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Bleeding Control, Bandaging, Fracture Management
- Burns, Choking, Seizures, Fainting
- Handling Shock and Unconsciousness



### 54.1.5 Unit 5: Ambulance Operations & Scene Safety

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Introduction to Ambulance Equipment
- Patient Lifting and Moving Techniques
- Personal Safety and Scene Management

### 54.1.6 Unit 6: Project Work & Viva

**Duration:** 30 Hours

- Simulate Emergency Scenarios (Mock Drills)
- Case Study Presentation (First Aid and Response)
- Final Practical Demo and Viva

## 54.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

## 54.3 Certification Outcome for 6 Months:

**“Certified Emergency Medical First Responder Assistant (Level 3.5)”**

Career Opportunities:

- Ambulance Helper
- Emergency Room Assistant

- Community First Aid Responder

## **55.0 Emergency Medical First Responder (EMFR) Assistant – 1 Year Program**

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Clinical Exposure + Mock Drills)

**Outcome:** Skilled in emergency patient care, trauma handling, ambulance operations, and mass casualty management

### **55.1 Unit-wise Syllabus**

Semester 1: Core Emergency Response Skills

#### **55.1.1 Unit 1: Emergency Medical Services (EMS) Fundamentals**

**Duration:** 40 Hours

- EMS Systems and Communication
- Legal and Ethical Issues in Emergency Care
- Medical Terminology for First Responders

#### **55.1.2 Unit 2: Patient Assessment and Emergency Interventions**

**Duration:** 50 Hours

- Rapid Trauma and Medical Assessments
- Managing Breathing and Circulatory Emergencies

- Patient History Collection and Documentation

### **55.1.3 Unit 3: Basic Life Support (BLS) and Airway Management**

**Duration:** 50 Hours

- Advanced CPR Techniques
- Use of Bag Valve Masks (BVM)
- Airway Suctioning Basics

Semester 2: Specialized Care and Emergency Transport

### **55.1.4 Unit 4: Trauma Care and Injury Management**

**Duration:** 50 Hours

- Spinal Immobilization
- Management of Chest, Abdominal, and Head Injuries
- Splinting Techniques and Traction Splint (Intro)

### **55.1.5 Unit 5: Ambulance Operations & Mass Casualty Management**

**Duration:** 50 Hours

- Ambulance Setup and Equipment Maintenance
- Triage in Mass Casualty Incidents (Basic Level)
- Disaster Response Basics (Earthquake, Fire, Accident)

### **55.1.6 Unit 6: Internship, Mock Drills & Viva**

**Duration:** 40 Hours

- Hospital Emergency Department or Ambulance Internship
- Conduct/Participate in 2+ Emergency Mock Drills
- Final Viva and Skill Demonstration

## 55.2 Assessment for 1-Year Course

Component	Weightage
Theory Examination	25%
Practical Skill Test	45%
Internship + Viva	30%

## 55.3 Certification Outcome for 1 Year:

**“Certified Emergency Medical First Responder Assistant (Advanced) (Level 4.5)”**

Career Opportunities:

- Emergency Medical Technician (EMT) Support Staff
- Ambulance Services Staff
- Disaster Response Team Member
- Healthcare NGO First Responder

# 56.0 Dental Chairside Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Simulation + Clinic Visit)

**Outcome:** Skilled in assisting dentists during procedures, maintaining asepsis, and patient preparation

## 56.1 Unit-wise Syllabus

### 56.1.1 Unit 1: Introduction to Dental Healthcare

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Dental Healthcare System Overview
- Dental Team Roles (Dentist, Assistant, Hygienist, Technician)
- Ethics, Confidentiality, and Patient Care

### 56.1.2 Unit 2: Dental Anatomy and Terminology

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Types of Teeth and Dental Charting
- Basic Tooth Morphology
- Terminologies: Occlusion, Caries, Restoration

### 56.1.3 Unit 3: Chairside Assisting Techniques

**Duration:** 30 Hours (Theory: 10 | Practical: 20)



- Setting up Dental Tray and Materials
- Four-Handed Dentistry Basics
- Assisting During Common Procedures (Filling, Cleaning)

#### **56.1.4 Unit 4: Infection Control & Sterilization**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Hand Hygiene and Personal Protective Equipment (PPE)
- Sterilization of Instruments (Autoclave, Chemical)
- Managing Dental Waste (Sharps, Biohazards)

#### **56.1.5 Unit 5: Dental Materials Handling**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Handling Impression Materials, Filling Materials
- Mixing Cements, Alginate Impressions Basics
- Storage and Expiry Management

#### **56.1.6 Unit 6: Project Work & Viva**

**Duration:** 30 Hours

- Dental Clinic Simulation: Setup + Patient Assistance
- Patient Record Preparation
- Final Skill Assessment and Viva

### **56.2 Assessment for 6-Month Course**

Component	Weightage
Theory Examination	30%
Practical Skill Test	50%
Project & Viva	20%

### 56.3 Certification Outcome for 6 Months:

**“Certified Dental Chairside Assistant (Basic) (Level 3.5)”**

Career Opportunities:

- Dental Clinic Assistant
- Chairside Helper for Dentists
- Dental Front Desk cum Assistant

## 57.0 Dental Chairside Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Clinical Posting)

**Outcome:** Competency in advanced chairside skills, sterilization protocols, patient support, and minor laboratory procedures

### 57.1 Unit-wise Syllabus

Semester 1: Basics of Dental Practice and Assistance

### **57.1.1 Unit 1: Dental Healthcare Delivery Systems**

**Duration:** 40 Hours

- Private vs Government Dental Clinics
- Scope and Importance of Chairside Assistance
- Dental Record Management

### **57.1.2 Unit 2: Detailed Dental Anatomy and Physiology**

**Duration:** 50 Hours

- Tooth Numbering Systems (FDI, Palmer)
- Structures of Oral Cavity
- Common Dental Diseases: Caries, Gingivitis, Periodontitis

### **57.1.3 Unit 3: Advanced Chairside Assistance Techniques**

**Duration:** 50 Hours

- Chairside Positioning
- Rubber Dam Application (Assistance)
- Suctioning and Moisture Control Techniques

Semester 2: Advanced Skills and Practical Internship

### **57.1.4 Unit 4: Dental Radiology Support (Intro)**

**Duration:** 50 Hours

- Dental X-ray Machine Basics (Intro Only)

- Patient Positioning for Radiographs
- Radiation Protection Principles

### **57.1.5 Unit 5: Specialized Assistance Areas**

**Duration:** 50 Hours

- Orthodontic Assistance (Braces)
- Periodontal Procedures Assistance (Scaling Support)
- Prosthodontics (Denture Handling)

### **57.1.6 Unit 6: Clinical Internship, Project & Viva**

**Duration:** 40 Hours

- 1 Month Dental Clinic/Hospital Posting
- Assist in Minimum 10 Procedures (Logbook)
- Final Practical Examination and Viva

## **57.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skills Test	45%
Internship + Viva	30%

## **57.3 Certification Outcome for 1 Year:**

**“Certified Dental Chairside Assistant (Advanced) (Level 4.5)”**

Career Opportunities:

- Chairside Assistant in Dental Clinics/Hospitals
- Dental Front Office cum Assistant
- Dental Surgery Assistant (Basic Level)
- Dental Camp Support Worker

## 58.0 Vision Technician Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Field Training)

**Outcome:** Basic skills in vision screening, optical equipment handling, and patient preparation

### 58.1 Unit-wise Syllabus

#### 58.1.1 Unit 1: Introduction to Eye Care and Vision Screening

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Overview of Eye Healthcare System
- Common Eye Disorders (Myopia, Hyperopia, Astigmatism)
- Role of Vision Technician Assistant



### **58.1.2 Unit 2: Basic Anatomy and Physiology of the Eye**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Structure and Function of the Eye
- Parts of the Eye: Cornea, Retina, Lens, Optic Nerve
- Understanding Visual Pathways

### **58.1.3 Unit 3: Vision Screening Techniques**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Visual Acuity Testing (Snellen's Chart)
- Color Vision Testing (Ishihara Test)
- Near Vision, Distance Vision Checkups

### **58.1.4 Unit 4: Basic Optical Dispensing Assistance**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Introduction to Lenses: Spherical, Cylindrical, Bifocal
- Frame Selection and Adjustment
- Basic Lens Cleaning and Care

### **58.1.5 Unit 5: Infection Control & Equipment Maintenance**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Cleaning and Maintenance of Vision Screening Tools
- Sterilization of Trial Frames, Lenses

- Basic Hygiene Practices in Clinics

### **58.1.6 Unit 6: Mini Project & Viva**

**Duration:** 30 Hours

- Conduct a Mock Vision Screening Camp
- Maintain Screening Records for 10 Patients
- Final Practical and Viva

## **58.2 Assessment for 6-Month Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

## **58.3 Certification Outcome for 6 Months:**

**“Certified Vision Screening Assistant (Level 3.5)”**

Career Opportunities:

- Optical Shop Assistant
- Vision Screening Camp Worker
- Eye Clinic Front Desk Support (Technical)

# 59.0 Vision Technician Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Clinical Exposure)

**Outcome:** Competency in preliminary eye testing, basic optical dispensing, and assisting in eye care services

## 59.1 Unit-wise Syllabus

Semester 1: Fundamentals of Vision Care

### 59.1.1 Unit 1: Introduction to Optometry and Eye Healthcare

**Duration:** 40 Hours

- Basics of Optometry Practice
- Patient Interaction Skills
- Healthcare Ethics in Eye Care

### 59.1.2 Unit 2: Detailed Anatomy and Physiology of Vision

**Duration:** 50 Hours

- Eye Structures in Detail
- Common Eye Diseases: Cataract, Glaucoma, Refractive Errors
- Impact of Diabetes and Hypertension on Vision

### **59.1.3 Unit 3: Vision Assessment Methods**

**Duration:** 50 Hours

- Advanced Visual Acuity Testing
- Retinoscopy (Intro Level Observation)
- Autorefractometer (Use and Interpretation Basics)

Semester 2: Clinical Skills and Optical Services

### **59.1.4 Unit 4: Optical Dispensing and Fitting**

**Duration:** 50 Hours

- Advanced Lens Types: Photochromatic, Progressive
- Frame Measurement and Fitting Techniques
- Lens Edging and Mounting Introduction (Observation)

### **59.1.5 Unit 5: Basic Assistance in Eye Procedures**

**Duration:** 50 Hours

- Assisting in Refraction Testing
- Pre-Surgical Eye Care Support
- Patient Education for Eye Care (Glasses Use, Eye Drops)

### **59.1.6 Unit 6: Internship, Project Work & Viva**

**Duration:** 40 Hours

- Internship in an Eye Clinic / Optical Shop (Minimum 1 Month)

- Prepare and Maintain Patient Screening Records (Minimum 20 Cases)
- Final Practical Test and Viva

## 59.2 Assessment for 1-Year Course

Component	Weightage
Theory Examination	25%
Practical Skills Test	45%
Internship + Viva	30%

## 59.3 Certification Outcome for 1 Year:

**“Certified Vision Technician Assistant (Level 4.5)”**

Career Opportunities:

- Eye Clinic Technician Assistant
- Optical Store Vision Assistant
- Vision Screening Technician for Camps & Schools



# 60.0 Dialysis Technician Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Simulation + Clinic Observation)

**Outcome:** Basic competency in assisting dialysis procedures, machine setup, and patient preparation

## 60.1 Unit-wise Syllabus

### 60.1.1 Unit 1: Introduction to Dialysis and Kidney Function

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Basics of Kidney Anatomy and Physiology
- Introduction to Chronic Kidney Disease (CKD)
- Role of Dialysis in Patient Care

### 60.1.2 Unit 2: Types of Dialysis and Overview

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Hemodialysis vs Peritoneal Dialysis
- Basic Understanding of Dialysis Access: Fistula, Catheters
- Introduction to Dialysis Equipment

### 60.1.3 Unit 3: Preparation for Dialysis Session

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Preparing the Dialysis Machine (Priming Basics)
- Setting up Dialyzer and Tubing
- Preparing Patient for Dialysis (Vitals Check, Weight Measurement)

#### **60.1.4 Unit 4: Patient Monitoring During Dialysis**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Monitoring BP, Heart Rate, Temperature
- Recognizing Common Complications: Hypotension, Cramps
- Basic Emergency Response Protocols

#### **60.1.5 Unit 5: Infection Control & Equipment Cleaning**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Sterilization and Disinfection Protocols
- Handling Blood Spills and Biohazardous Waste
- Cleaning and Decontamination of Machines

#### **60.1.6 Unit 6: Project Work & Viva**

**Duration:** 30 Hours

- Mock Setup of Dialysis Unit
- Patient Handling Simulation
- Final Skill Assessment and Viva

### **60.2 Assessment for 6-Month Course**

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

## 60.3 Certification Outcome for 6 Months:

**“Certified Dialysis Technician Assistant (Basic) (Level 3.5)”**

Career Opportunities:

- Dialysis Unit Assistant
- Hospital Hemodialysis Helper
- Patient Care Assistant (Dialysis Focused)

## 61.0 Dialysis Technician Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Practical + Clinical Internship)

**Outcome:** Skilled in supporting full dialysis procedures, patient management, equipment handling, and infection control in dialysis units

### 61.1 Unit-wise Syllabus

Semester 1: Fundamentals of Dialysis Care

### **61.1.1 Unit 1: Kidney Anatomy, Physiology, and Diseases**

**Duration:** 40 Hours

- Kidney Functions and Urine Formation
- Causes of Renal Failure
- Stages of CKD and ESRD (End Stage Renal Disease)

### **61.1.2 Unit 2: Principles and Techniques of Dialysis**

**Duration:** 50 Hours

- Detailed Hemodialysis Process
- Understanding Water Treatment in Dialysis
- Peritoneal Dialysis Basics (CAPD, APD)

### **61.1.3 Unit 3: Vascular Access Care**

**Duration:** 50 Hours

- AV Fistula Care and Monitoring
- Catheter Care and Dressing
- Infection Signs and First Aid Measures

Semester 2: Clinical Procedures and Field Exposure

### **61.1.4 Unit 4: Dialysis Machine Handling and Patient Monitoring**

**Duration:** 50 Hours

- Detailed Setup and Calibration of Machine

- Machine Alarms: Causes and Immediate Actions
- Anticoagulation Basics (Heparin use)

### **61.1.5 Unit 5: Emergency Management and Infection Control**

**Duration:** 50 Hours

- Handling Emergencies: Hypotension, Cardiac Arrest, Bleeding
- Strict Infection Control Practices
- Post-Dialysis Cleaning and Disinfection Protocols

### **61.1.6 Unit 6: Clinical Internship, Project & Viva**

**Duration:** 40 Hours

- Internship in Dialysis Units (Hospital/Private Center)
- Assist Minimum 20 Dialysis Sessions (Logbook Record)
- Project Presentation and Final Viva

## **61.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skill Test	45%
Internship + Viva	30%

## **61.3 Certification Outcome for 1 Year:**

**“Certified Dialysis Technician Assistant (Advanced) (Level 4.5)”**



Career Opportunities:

- Dialysis Center Technician Assistant
- Hospital Dialysis Support Staff
- Home-Based Dialysis Care Assistant (Supervised)

# IKS-Based Vocational Courses for VSOS

## 62.0 Yoga Wellness Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Daily Practice + Practical Teaching)

**Outcome:** Basic ability to assist in yoga sessions, personal wellness coaching, and community yoga programs

## 62.1 Unit-wise Syllabus

### 62.1.1 Unit 1: Fundamentals of Yoga and Wellness

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Introduction to Yoga: Meaning, History, Relevance Today
- Holistic Health: Body, Mind, and Spirit
- Yoga for Preventive Health Care

### **62.1.2 Unit 2: Yoga Asanas (Basic Postures)**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Standing, Sitting, Supine, and Prone Postures
- Correct Techniques and Breathing during Asanas
- Benefits, Indications, and Contraindications

### **62.1.3 Unit 3: Pranayama (Breathing Techniques)**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Introduction to Yogic Breathing
- Practices: Anulom Vilom, Kapalabhati, Bhramari
- Importance of Breath Control in Wellness

### **62.1.4 Unit 4: Relaxation & Meditation Techniques**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Yoga Nidra and Guided Relaxation
- Basic Meditation for Stress Management
- Mindfulness Practices

### **62.1.5 Unit 5: Introduction to Yogic Diet and Lifestyle**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Satvik, Rajsik, and Tamsik Food Concepts
- Daily Routines (Dinacharya) for Health
- Basics of Detox and Fasting

### **62.1.6 Unit 6: Project Work & Viva**

**Duration:** 30 Hours

- Design a simple yoga session for a group (30 min)
- Maintain a daily practice journal
- Final Practical and Viva Test

## 62.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Demonstration	50%
Project & Viva	20%

## 62.3 Certification Outcome for 6 Months:

**“Certified Yoga Wellness Assistant (Level 3.5)”**

Career Opportunities:

- Assistant Yoga Trainer
- Wellness Program Coordinator (Basic Level)
- Community Yoga Facilitator

## 63.0 Yoga Wellness Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Yoga Practicum + Teaching Practice)

**Outcome:** Skillful assistant capable of conducting beginner yoga classes, supporting wellness programs, and promoting healthy living

## 63.1 Unit-wise Syllabus

Semester 1: Yoga Foundations and Practical Mastery

### 63.1.1 Unit 1: Philosophy of Yoga & Wellness Science

**Duration:** 40 Hours

- Overview of Patanjali's Yoga Sutras
- Panchakosha Theory (Five Sheaths of Body)
- Concept of Health in Yoga

### 63.1.2 Unit 2: Asanas – Intermediate Level Practice

**Duration:** 50 Hours

- Sequences for Flexibility, Strength, Balance
- Therapeutic Asanas for Back Pain, Stress, Obesity (Intro)
- Surya Namaskar (Detailed Practice)

### 63.1.3 Unit 3: Advanced Breathing & Pranayama Techniques

**Duration:** 50 Hours

- Nadi Shodhana, Ujjayi, Sheetali, Bhastrika
- Breath and Mind Control Connection
- Precautions and Benefits

Semester 2: Wellness Application and Teaching Skills

### 63.1.4 Unit 4: Meditation and Yogic Psychology

**Duration:** 50 Hours

- Dharana (Concentration) and Dhyana (Meditation)
- Stress and Anxiety Management
- Mindfulness-Based Yoga Programs

### 63.1.5 Unit 5: Yoga Teaching Practice and Wellness Management

**Duration:** 60 Hours

- Planning and Conducting Group Sessions
- Addressing Different Age Groups: Children, Adults, Elderly
- Organizing Wellness Camps and Awareness Drives

### 63.1.6 Unit 6: Internship, Project, and Viva

**Duration:** 40 Hours

- 1-Month Practical Training (Community / Yoga Centre)
- Prepare a Yoga Therapy Plan for Common Lifestyle Issues
- Final Viva and Demonstration

## 63.2 Assessment for 1-Year Course

Component	Weightage
Theory Examination	25%
Practical Skills Test	45%
Internship & Project Viva	30%

## 63.3 Certification Outcome for 1 Year:

**“Certified Yoga Wellness Assistant (Advanced Level) (Level 4.5)”**

Career Opportunities:

- Assistant Yoga Instructor (Studios, Resorts, Health Clubs)
- Wellness Program Coordinator
- Corporate Wellness Facilitator
- Yoga Camp Organizer for Schools and Communities



## 64.0 Jyotish (Astrology) Basics – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Chart Practice + Case Studies)

**Outcome:** Foundational understanding of Indian astrology principles, birth charts, and prediction basics

### 64.1 Unit-wise Syllabus

#### 64.1.1 Unit 1: Introduction to Jyotish Shastra

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- Definition and Scope of Astrology
- History and Development of Jyotish
- Branches: Siddhanta (Astronomical), Hora (Predictive), Samhita (Mundane)
- Importance of Karma Theory and Time

#### 64.1.2 Unit 2: Basic Astronomical Concepts

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Zodiac Signs (Rashis) and Planets (Grahas)
- Nakshatras and Their Meanings
- Tithi, Vara, Yoga, Karana
- Ayanamsa and Panchanga Basics

### 64.1.3 Unit 3: Houses and Bhavas

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- 12 Bhavas: Meanings and Significations
- Lagna (Ascendant) and Its Importance
- House-Planet-Rashi Relationships
- Basic House Reading

### 64.1.4 Unit 4: Basics of Chart Preparation

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Understanding Birth Chart (Kundali) Format
- Manual and Software Methods of Horoscope Making
- North Indian and South Indian Style Charts

### 64.1.5 Unit 5: Planetary Effects and Strengths

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Nature of Planets: Benefic, Malefic
- Own House, Exaltation, Debilitation
- Aspects (Drishti) of Planets

### 64.1.6 Unit 6: Mini Project & Viva

**Duration:** 30 Hours

- Prepare 3 Sample Charts Manually
- Identify Ascendant, Moon Sign, and Major Planetary Positions
- Final Viva and Presentation

## 64.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%

Practical Chart Making	50%
Project & Viva	20%

### 64.3 Certification Outcome for 6 Months:

**“Certified Jyotish Basics Practitioner (Level 3.5)”**

Career Opportunities:

- Assistant to Astrologers
- Panchanga Preparation Assistant
- Astrology Course Coordinator

## 65.0 Jyotish (Astrology) Basics – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Applied Prediction + Case Studies)

**Outcome:** Skilled in preparing horoscopes, basic dasha analysis, and giving preliminary astrological consultations

### 65.1 Unit-wise Syllabus

Semester 1: Core Astrology Foundations

#### 65.1.1 Unit 1: Deeper Study of Zodiac Signs and Planets

**Duration:** 40 Hours

- Rashi Characteristics, Lords, Elements (Tattvas)
- Role of Sun, Moon, Mars, Mercury, Jupiter, Venus, Saturn, Rahu, Ketu

- Planetary Friendship and Enmity

### **65.1.2 Unit 2: Bhavas and Life Aspects**

**Duration:** 50 Hours

- Health, Wealth, Marriage, Career, Children, Spirituality Houses
- Detailed Analysis of Lagna and Lagna Lord
- Karakas (Significators)

### **65.1.3 Unit 3: Chart Preparation, Divisional Charts (Intro)**

**Duration:** 50 Hours

- Navamsa (D-9) Basics
- Chalit and Bhava Kundalis
- Basic Understanding of Vargas

Semester 2: Prediction and Applied Astrology

### **65.1.4 Unit 4: Dasha Systems and Timing of Events**

**Duration:** 50 Hours

- Vimshottari Dasha Basics
- Mahadasha, Antardasha Effects
- Major Event Prediction (Education, Marriage, Job)

### **65.1.5 Unit 5: Transit Analysis (Gochar) and Remedies (Shanti)**

**Duration:** 60 Hours

- Transits of Jupiter, Saturn, Rahu, Ketu
- Remedies: Mantra, Yantra, Gemstone (Intro Only)
- Simple Muhurat Selection Techniques

### **65.1.6 Unit 6: Internship / Project & Viva**

**Duration:** 40 Hours

- Chart Analysis Practice: 10 Real-Life Cases
- Prepare 3 Detailed Horoscope Reports with Dasha Prediction
- Final Practical Assessment and Viva

## 65.2 Assessment for 1-Year Course

Component	Weightage
Theory Examination	25%
Practical Chart Reading	45%
Project Reports & Viva	30%

## 65.3 Certification Outcome for 1 Year:

**“Certified Jyotish Astrology Assistant (Level 4.5)”**

Career Opportunities:

- Junior Astrologer
- Horoscope Preparation Executive
- Panchanga Consultant
- Astrology Event Advisor (Weddings, Career Counseling)

## 66.0 Vastu Shastra Assistant – 6 Months Program



**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Case Studies + Field Visits)

**Outcome:** Understand basic Vastu principles for residential and small commercial buildings

## 66.1 Unit-wise Syllabus

### 66.1.1 Unit 1: Introduction to Vastu Shastra

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- History and Origin of Vastu
- Importance of Directions (Diksha)
- Five Elements (Panchamahabhutas) and their Relevance
- Goals of Vastu: Health, Prosperity, Peace

### 66.1.2 Unit 2: Directional Analysis in Vastu

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Eight Cardinal Directions and their Lords
- Importance of Magnetic North
- Compass Reading Basics
- Vastu for Plot Selection and Shape

### 66.1.3 Unit 3: Vastu for Residential Buildings

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Room Placement: Bedroom, Kitchen, Toilet, Living Room
- Main Door Placement and Pooja Room Location
- Common Vastu Doshas (Defects) and Simple Remedies

### 66.1.4 Unit 4: Energy Balancing and Vastu Corrections

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Concept of Energy Fields (Positive/Negative Zones)
- Basic Remedies Without Demolition
- Role of Colors, Mirrors, Plants, and Pyramids in Corrections

### 66.1.5 Unit 5: Preparation of Basic Vastu Plans

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Simple Floor Plan Marking
- Preparing Directional Layouts
- Sample Case Studies of Homes

### 66.1.6 Unit 6: Project Work and Viva

**Duration:** 30 Hours

- Vastu Analysis of a Small House/Shop
- Report Preparation and Presentation
- Final Viva and Evaluation

## 66.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Layout Analysis	50%
Project & Viva	20%

## 66.3 Certification Outcome for 6 Months:

**“Certified Vastu Shastra Assistant (Level 3.5)”**

Career Opportunities:

- Vastu Consultant Assistant
- Residential Vastu Field Surveyor
- Layout Pre-check Specialist

## 67.0 Vastu Shastra Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Practical Application + Internship)

**Outcome:** Competency to assist in full Vastu projects, surveys, and consulting work

### 67.1 Unit-wise Syllabus

Semester 1: Fundamental Concepts and Applications

#### 67.1.1 Unit 1: Advanced Directional Sciences

**Duration:** 40 Hours

- In-depth Study of Directions and Nakshatra Influence
- Compass Techniques and Magnetic Anomalies
- Energy Zones: Active and Passive Spaces

#### 67.1.2 Unit 2: Vastu for Different Properties

**Duration:** 50 Hours

- Independent Homes, Apartments, Offices, Shops
- Vastu Planning for Temples and Educational Institutions
- Industrial and Warehouse Layout Basics

#### 67.1.3 Unit 3: Detailed Vastu Dosha Analysis & Remedies

**Duration:** 50 Hours

- Identifying Major and Minor Doshas
- Corrections with Pyramids, Mirrors, Colors, Crystals
- Yantras and Traditional Indian Remedies

Semester 2: Field Applications and Project Work

#### **67.1.4 Unit 4: Map Reading, Layout Preparation & Reporting**

**Duration:** 60 Hours

- Preparing Vastu Layouts (Scaled Drawings)
- Marking Rooms, Doors, Windows, Water Sources
- Sample Report Format for Clients

#### **67.1.5 Unit 5: Introduction to Modern Vastu Trends**

**Duration:** 60 Hours

- Combining Vastu with Modern Architecture
- Vastu in Interior Design and Landscaping
- Introduction to Feng Shui Basics for Comparative Study

#### **67.1.6 Unit 6: Internship, Final Project, and Viva**

**Duration:** 40 Hours

- Field Visit to Residential and Commercial Projects
- Prepare 3 Vastu Case Studies (Real/Sample Sites)
- Final Practical Test and Viva

### **67.2 Assessment for 1-Year Course**

Component	Weightage
Theory Examination	25%

Practical Work	45%
Internship & Project Viva	30%

### 67.3 Certification Outcome for 1 Year:

**“Certified Vastu Shastra Assistant (Advanced Level) (Level 4.5)”**

Career Opportunities:

- Junior Vastu Consultant
- Assistant in Vastu Corrections and Design
- Real Estate Pre-Survey Specialist
- Home and Office Energy Correction Support

## 68.0 Ayurveda Lifestyle Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Wellness Activities)

**Outcome:** Understand basic Ayurveda principles for lifestyle management and daily wellness advice

### 68.1 Unit-wise Syllabus



### **68.1.1 Unit 1: Introduction to Ayurveda and Life Science**

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- Concept of Ayurveda: Definition and Importance
- Panchamahabhuta (Five Element Theory)
- Tridosha Concept: Vata, Pitta, Kapha
- Ayurveda and Modern Wellness

### **68.1.2 Unit 2: Ayurvedic Daily Routine (Dinacharya)**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Morning Routine: Waking Time, Hygiene Practices (Gandusha, Abhyanga)
- Meals Timing and Sleep Patterns
- Seasonal Routines (Ritucharya) (Intro Level)

### **68.1.3 Unit 3: Basics of Ayurvedic Diet (Ahara)**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Six Tastes (Shad Rasa)
- Simple Home-Based Dietary Recommendations by Dosha
- Importance of Digestive Fire (Agni)

### **68.1.4 Unit 4: Ayurvedic Lifestyle Therapies**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Oil Massage (Abhyanga) Basics
- Steam Therapy (Swedana) Intro
- Yoga, Meditation, and Ayurveda Connection

### **68.1.5 Unit 5: Introduction to Herbal Home Remedies**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Simple Herbs for Cough, Cold, Digestive Issues
- Preparing Herbal Teas, Decoctions (Kashayam)
- Safety in Home Remedies

### 68.1.6 Unit 6: Project Work & Viva

**Duration:** 30 Hours

- Prepare a Personal Wellness Plan Based on Dosha
- Create a Diet and Routine Plan for a Case Study
- Final Practical Demo and Viva

### 68.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

### 68.3 Certification Outcome for 6 Months:

**“Certified Ayurveda Lifestyle Assistant (Level 3.5)”**

Career Opportunities:

- Ayurveda Wellness Center Assistant
- Home-Based Wellness Coach
- Panchakarma Reception/Consultation Desk Assistant

# 69.0 Ayurveda Lifestyle Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Practical Wellness Plans + Internship)

**Outcome:** Support Ayurveda physicians, develop lifestyle wellness programs, guide basic diet/lifestyle management

## 69.1 Unit-wise Syllabus

Semester 1: Core Ayurveda Science and Wellness Planning

### 69.1.1 Unit 1: Fundamentals of Ayurveda and Preventive Health

**Duration:** 40 Hours

- Swasthya (Health) Definition According to Ayurveda
- Importance of Balance in Tridoshas
- Doshic Imbalances and Daily Prevention

### 69.1.2 Unit 2: Ayurveda Anatomy and Physiology (Basic)

**Duration:** 50 Hours

- Dhatus (Body Tissues) and Malas (Wastes)
- Agni (Digestive Fire) and Ojas (Vitality)
- Introduction to Nadis (Energy Channels)

### 69.1.3 Unit 3: Dinacharya, Ritucharya, and Sadvrutta (Code of Conduct)

**Duration:** 50 Hours

- Morning to Night Lifestyle Guidelines
- Adjusting Lifestyle According to Seasons
- Ethical Conduct for Physical and Mental Health

Semester 2: Practical Application and Field Exposure

#### **69.1.4 Unit 4: Ayurvedic Nutrition and Herbal Science**

**Duration:** 60 Hours

- Diet Planning According to Body Constitution (Prakriti)
- Kitchen Herbs and Spices for Daily Wellness
- Preparation of Herbal Teas, Churnas (Powders), Home Remedies

#### **69.1.5 Unit 5: Basic Panchakarma and Rejuvenation Therapy (Intro)**

**Duration:** 60 Hours

- Panchakarma Overview (Vamana, Virechana, Basti, Nasya, Raktamokshana)
- Snehana (Oil Therapy) and Swedan (Steam Therapy) - Practical Intro
- Role of Assistant in Panchakarma Preparation

#### **69.1.6 Unit 6: Internship, Wellness Program Project & Viva**

**Duration:** 40 Hours

- Community Wellness Camps Participation
- Personal Case Studies (Minimum 5)
- Final Practical, Project Presentation and Viva

### **69.2 Assessment for 1-Year Course**

Component	Weightage
Theory Examination	25%
Practical Assignments	45%
Internship & Viva	30%

### 69.3 Certification Outcome for 1 Year:

**“Certified Ayurveda Lifestyle & Wellness Assistant (Level 4.5)”**

Career Opportunities:

- Ayurveda Wellness Coach
- Ayurveda Clinic/Center Assistant
- Lifestyle Consultant for Resorts, Retreats
- Panchakarma Assistant (Non-clinical Support)

## VSOS Vocational Courses – Fire and Safety

### 70.0 Fire & Safety Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5



**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Safety Drill Practice + Field Demo)

**Outcome:** Basic knowledge of fire hazards, safe evacuation, and first-response firefighting

## 70.1 Unit-wise Syllabus

### 70.1.1 Unit 1: Introduction to Fire Safety

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- Basics of Fire Science (Fire Triangle: Heat, Fuel, Oxygen)
- Causes of Fire in Homes, Offices, and Industries
- Importance of Fire Safety in Public and Private Spaces

### 70.1.2 Unit 2: Types of Fires and Fire Extinguishers

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Classes of Fire: A, B, C, D, K
- Types of Fire Extinguishers (Water, Foam, CO<sub>2</sub>, Dry Powder)
- Correct Method of Using Fire Extinguishers (PASS Technique)

### 70.1.3 Unit 3: Evacuation Procedures and Safety Drills

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Emergency Exit Planning
- Assembly Point Protocols
- Evacuation during Fire and Earthquake Drills
- Role of Fire Wardens

### 70.1.4 Unit 4: Fire Detection and Alarm Systems

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Smoke Detectors, Heat Sensors, Sprinkler Systems
- Manual Call Points (MCP) and Fire Alarm Panels
- Fire Safety Signage and Emergency Lighting

### 70.1.5 Unit 5: First Aid for Fire Incidents

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Treatment for Burns and Smoke Inhalation
- CPR (Cardio-Pulmonary Resuscitation) Basics
- Handling Fire Victims Safely

### 70.1.6 Unit 6: Mini Project and Safety Drill Demonstration

**Duration:** 30 Hours

- Organize a Mock Fire Drill
- Prepare Fire Safety Audit Report for a Small Building
- Final Skill Test and Viva

## 70.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Mini Project & Viva	20%

## 70.3 Certification Outcome for 6 Months:

**“Certified Basic Fire & Safety Assistant (Level 3.5)”**

Career Opportunities:

- Safety Helper in Industries, Malls, Hospitals
- Fire Drill Assistant Coordinator
- Basic Emergency Response Worker

# 71.0 Fire & Safety Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Theory + Advanced Practical + Field Internship)

**Outcome:** Skilled in fire prevention, industrial safety audits, emergency response coordination

## 71.1 Unit-wise Syllabus

Semester 1: Fire Safety Core Concepts and Basic Applications

### 71.1.1 Unit 1: Advanced Fire Science and Combustion Principles

**Duration:** 40 Hours

- Types of Fires and Fire Behavior
- Stages of Fire: Incipient, Growth, Fully Developed, Decay
- Flashover and Backdraft Phenomena

### 71.1.2 Unit 2: Fire Extinguishing Techniques and Equipment Handling

**Duration:** 50 Hours

- Portable and Fixed Fire Extinguishers
- Fire Hose, Nozzles, Hydrant Systems
- Sprinkler System Layouts and Operation

### 71.1.3 Unit 3: Industrial and Building Fire Safety

**Duration:** 50 Hours

- Safety Codes and Regulations (NBC India, NFPA Intro)
- Electrical Fire Hazards and Control
- Building Safety Audit Basics

#### **71.1.4 Unit 4: Disaster Management and Emergency Response Planning**

**Duration:** 50 Hours

- Emergency Response Teams (ERT) and Roles
- Risk Assessment and Hazard Identification
- Fire Evacuation Drill Planning and Conduct

#### **71.1.5 Unit 5: First Aid and Basic Life Support (BLS)**

**Duration:** 60 Hours

- Burn Management Advanced Techniques
- Full CPR and AED (Automated External Defibrillator) Training
- Incident Reporting and Post-Incident Procedures

#### **71.1.6 Unit 6: Field Internship, Safety Audit Project, and Viva**

**Duration:** 40 Hours

- Minimum 1-Month Practical Internship in Industry/Facility
- Conduct Fire Risk Assessment and Prepare Audit Report
- Final Practical Skill Test and Viva

### **71.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Drills	45%
Internship & Project Viva	30%

## 71.3 Certification Outcome for 1 Year:

**“Certified Fire & Industrial Safety Assistant (Level 4.5)”**

Career Opportunities:

- Fire and Safety Assistant in Industrial Units
- Safety and Evacuation Officer in Corporate Offices
- Junior Safety Auditor in Construction and Infrastructure Projects
- Event and Public Safety Coordinator

## 72.0 Industrial Fire Safety Technician – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical + Industrial Visit)

**Outcome:** Basic skills to handle fire emergencies in industrial and commercial setups

### 72.1 Unit-wise Syllabus

#### 72.1.1 Unit 1: Fundamentals of Industrial Fire Safety

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- Fire Science: Fire Triangle and Tetrahedron
- Causes of Industrial Fires
- Fire Load Calculation (Intro)
- Importance of Fire Safety Policies

#### 72.1.2 Unit 2: Fire Detection and Alarm Systems

VOCATIONAL SKILL OPENING SCHOOL SECONDARY PROGRAM SYLLABUS



**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Fire Alarm Systems: Smoke, Heat, Flame Detectors
- Manual Alarm Systems and Panels
- Public Address (PA) System Basics

### **72.1.3 Unit 3: Types of Fire and Fire Extinguishing Agents**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Types of Fires (Class A, B, C, D, K) in Industries
- Types of Extinguishers: CO<sub>2</sub>, DCP, Foam, Water, Wet Chemical
- PASS Technique and Application

### **72.1.4 Unit 4: Fire Fighting Equipment and Water Systems**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Hydrants, Sprinkler Systems, Hose Reels
- Fire Pumps, Jockey Pumps (Intro Level)
- Practical Hose Handling and Nozzle Operation

### **72.1.5 Unit 5: Emergency Procedures and Evacuation Plans**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Emergency Response Plan (ERP) Basics
- Mock Drills and Evacuation Procedures
- Assembly Points and Roll Call System

### **72.1.6 Unit 6: Project Work & Viva**

**Duration:** 30 Hours

- Fire Safety Inspection of a Small Industry Unit
- Mini Fire Drill Execution Plan
- Final Viva and Skill Demonstration

## **72.2 Assessment for 6-Month Course**

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

## 72.3 Certification Outcome for 6 Months:

**“Certified Industrial Fire Safety Technician (Basic) (Level 3.5)”**

Career Opportunities:

- Industrial Fire Safety Assistant
- Fire Watch Technician in Factories
- Emergency Drill Support Staff

## 73.0 Industrial Fire Safety Technician – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Industrial Training + Field Projects)

**Outcome:** Competent to monitor, manage, and respond to industrial fire emergencies independently

## 73.1 Unit-wise Syllabus

Semester 1: Core Industrial Fire Protection Knowledge

### **73.1.1 Unit 1: Advanced Fire Science and Behavior in Industries**

**Duration:** 40 Hours

- Stages of Fire Development
- Fire Spread Mechanisms in Industrial Setups
- Flash Points, Fire Loading, Hazard Identification

### **73.1.2 Unit 2: Fire Protection Equipment and Systems**

**Duration:** 50 Hours

- Hydrant System Layouts, Hose Handling Advanced Techniques
- Deluge Systems, Sprinkler Systems, Gas Suppression Systems (Intro)
- Fire Door, Fire Curtain, Smoke Extraction Systems

### **73.1.3 Unit 3: Fire Risk Assessment and Safety Standards**

**Duration:** 50 Hours

- Risk Assessment Methodologies (HAZOP, HIRA Basics)
- Indian Fire Safety Codes (NBC 2016, IS 2190)
- OSHA Fire Safety Requirements (Intro)

Semester 2: Advanced Industrial Safety Operations

### **73.1.4 Unit 4: Incident Management and Emergency Response**

**Duration:** 50 Hours

- Emergency Response Planning and Drills
- Fire Control Room Operations
- Use of Breathing Apparatus (Self-Contained Breathing Apparatus - SCBA Basics)

### **73.1.5 Unit 5: Specialized Fire Hazards in Industries**

**Duration:** 60 Hours

- Electrical Fires, Chemical Fires, Warehouse Fires
- Flammable Liquids and Gas Storage Safety

- Case Studies: Industrial Fire Disasters

### **73.1.6 Unit 6: Internship, Field Project & Viva**

**Duration:** 40 Hours

- Minimum 1 Month Field Training at Industrial Site
- Preparation of Fire Safety Audit Report for an Industrial Unit
- Final Skill Demonstration and Viva

## **73.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Field Skills	45%
Internship & Viva	30%

## **73.3 Certification Outcome for 1 Year:**

**“Certified Industrial Fire Safety Technician (Advanced Level) (Level 4.5)”**

Career Opportunities:

- Industrial Fire Safety Officer (Entry Level)
- Fire Control Room Operator
- Industrial Emergency Response Technician
- Assistant Fire Auditor

# 74.0 Hospital Safety Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Simulation + Safety Drill Participation)

**Outcome:** Basic safety, emergency response, and infection control support in hospital environments

## 74.1 Unit-wise Syllabus

### 74.1.1 Unit 1: Introduction to Hospital Safety and Patient Rights

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- Importance of Safety in Healthcare Settings
- Patient Rights and Responsibilities
- Safety Responsibilities of a Hospital Assistant

### 74.1.2 Unit 2: Fire Safety and Emergency Evacuation in Hospitals

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Fire Hazards in Hospitals (Oxygen Cylinders, Flammable Materials)
- Fire Detection and Alarm Systems
- Evacuation Planning and Role of a Safety Assistant

### 74.1.3 Unit 3: Infection Control and Hygiene Practices

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Standard Precautions (Hand Hygiene, PPE)
- Biomedical Waste Segregation (Color Coding)
- Needle Stick Injury and Spill Management



#### **74.1.4 Unit 4: Basic Life Support and First Aid**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- CPR (Cardiopulmonary Resuscitation) Basics
- First Aid for Falls, Burns, Choking in Hospital Environment
- Safe Transport of Patients During Emergencies

#### **74.1.5 Unit 5: Workplace Safety and Hazard Management**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Slips, Trips, and Falls Prevention
- Safe Handling of Equipment and Beds
- Use of Wheelchairs, Stretchers, and Lifts Properly

#### **74.1.6 Unit 6: Project Work and Viva**

**Duration:** 30 Hours

- Conduct a Mini Safety Audit of a Hospital Section
- Prepare an Infection Control Checklist
- Final Practical Demonstration and Viva

### **74.2 Assessment for 6-Month Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	30%
Practical Skills Test	50%
Project & Viva	20%

### **74.3 Certification Outcome for 6 Months:**

## **“Certified Hospital Safety Assistant (Level 3.5)”**

Career Opportunities:

- Hospital Support Safety Assistant
- Infection Control Helper
- Hospital Emergency Evacuation Assistant

# **75.0 Hospital Safety Assistant – 1 Year Program**

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Practical Exposure + Internship)

**Outcome:** Capable of actively managing hospital safety compliance, infection control monitoring, and assisting in emergency management plans

## **75.1 Unit-wise Syllabus**

Semester 1: Core Hospital Safety Knowledge and Procedures

### **75.1.1 Unit 1: Hospital Safety Policies and Legal Requirements**

**Duration:** 40 Hours

- Hospital Accreditation Standards (NABH Basics)
- Patient Safety Goals (WHO)
- Legal Liabilities in Healthcare

### **75.1.2 Unit 2: Fire and Hazardous Material Safety in Healthcare**

**Duration:** 50 Hours

- Handling of Oxygen Cylinders, Flammable Chemicals, Gas Leaks
- Types of Extinguishers and Fire Drill Execution

- Hospital Fire and Disaster Management Plan

### **75.1.3 Unit 3: Advanced Infection Control and PPE Protocols**

**Duration:** 50 Hours

- Detailed Handwashing Steps (WHO Technique)
- Airborne, Droplet, and Contact Precautions
- Advanced Biomedical Waste Management

Semester 2: Emergency Preparedness and Field Work

### **75.1.4 Unit 4: Patient Handling and Emergency Transport**

**Duration:** 60 Hours

- Triage Basics During Mass Casualty
- Patient Lifting and Transfer Safety
- Ambulance Safety Measures

### **75.1.5 Unit 5: Occupational Health & Safety for Healthcare Workers**

**Duration:** 60 Hours

- Workplace Ergonomics in Hospitals
- Stress and Burnout Prevention in Healthcare Staff
- Managing Psychological First Aid During Disasters

### **75.1.6 Unit 6: Internship, Project Work and Final Assessment**

**Duration:** 40 Hours

- Minimum 1-Month Internship at Hospital/Clinic
- Hospital Safety Audit Project
- Final Viva and Practical Skills Test

## **75.2 Assessment for 1-Year Course**

Component	Weightage
Theory Examination	25%
Practical Skills Test	45%
Internship & Project Viva	30%

### 75.3 Certification Outcome for 1 Year:

**“Certified Hospital Safety Technician (Level 4.5)”**

Career Opportunities:

- Hospital Safety Officer Assistant
- Infection Control Program Coordinator (Entry-Level)
- Emergency Response Technician in Healthcare Facilities
- Hospital Quality and Compliance Support Staff

## 76.0 Construction Site Fire & Safety Supervisor – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Safety Drills + Site Simulation)

**Outcome:** Basic ability to identify, prevent, and manage fire hazards and safety risks at construction sites

## **76.1 Unit-wise Syllabus**

### **76.1.1 Unit 1: Introduction to Construction Site Safety**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Importance of Safety on Construction Sites
- Types of Hazards (Fire, Fall, Electrical, Mechanical)
- Roles and Responsibilities of Fire & Safety Supervisor

### **76.1.2 Unit 2: Basics of Fire Science and Site Fire Hazards**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Fire Triangle and Fire Behavior in Open/Construction Areas
- Flammable Materials on Site (Paint, LPG, Solvents)
- Temporary Electrical Installations and Fire Risk

### **76.1.3 Unit 3: Fire Prevention and Control Measures**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Types of Fire Extinguishers and their Use
- Fire Watch Duty and Fire Watch Checklists
- Hot Work Permit System (Intro Level)

### **76.1.4 Unit 4: Personal Protective Equipment (PPE) and Site Safety Tools**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Helmets, Safety Shoes, Safety Belts, Fire-Resistant Clothing
- Barricading, Signage, Safety Nets, Extinguishers Location Planning



### 76.1.5 Unit 5: Emergency Response and Evacuation at Construction Sites

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Developing Emergency Evacuation Plans
- Emergency Assembly Points
- Incident Reporting and Recording Procedures

### 76.1.6 Unit 6: Mini Project and Safety Drill

**Duration:** 30 Hours

- Conduct a Mock Site Evacuation Drill
- Prepare a Safety Inspection Report
- Final Practical Demonstration and Viva

## 76.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Skills Test	50%
Mini Project & Viva	20%

## 76.3 Certification Outcome for 6 Months:

**“Certified Construction Site Fire & Safety Supervisor (Basic Level) (Level 3.5)”**

Career Opportunities:

- Fire and Safety Assistant at Construction Sites
- Fire Watch Supervisor in Construction Projects
- Site Safety Monitoring Staff

# 77.0 Construction Site Fire & Safety Supervisor – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Field Visits + Practical Internships)

**Outcome:** Supervision-level skills to enforce safety rules, manage fire control, and conduct site audits for risk reduction

## 77.1 Unit-wise Syllabus

Semester 1: Construction Safety Fundamentals and Fire Management

### 77.1.1 Unit 1: Construction Safety Management System

**Duration:** 40 Hours

- Legal Requirements (Factories Act, Building Codes)
- Roles of Safety Officers, Supervisors, Engineers
- Importance of Safety Induction for Workers

### 77.1.2 Unit 2: Advanced Fire Science and Hazard Control

**Duration:** 50 Hours

- Fire Load Assessment at Sites
- Flash Points of Materials (Paints, Diesel, LPG)
- Fire Risk Mitigation Planning

### 77.1.3 Unit 3: Fire Protection Systems and Equipment Installation

**Duration:** 50 Hours

- Temporary Fire Alarm Systems for Sites
- Fire Hydrants, Hose Reel Systems at Construction Zones
- Maintenance of Fire Extinguishers and Fire Blankets

#### **77.1.4 Unit 4: Accident Investigation and Reporting**

**Duration:** 50 Hours

- Root Cause Analysis
- Preparing Investigation Reports and Action Plans
- Near-Miss Reporting Systems

#### **77.1.5 Unit 5: Emergency Preparedness and Disaster Planning**

**Duration:** 60 Hours

- Disaster Management Plan for Construction Sites
- Large Scale Fire Evacuation Drills
- Coordination with Local Fire Authorities

#### **77.1.6 Unit 6: Field Internship, Safety Audit Project & Viva**

**Duration:** 40 Hours

- Conduct 1-Month Practical Internship at an Active Construction Site
- Prepare Full Site Safety Audit Report (Checklist, Observations, Action Taken)
- Final Skill Assessment and Viva

### **77.2 Assessment for 1-Year Course**

<b>Component</b>	<b>Weightage</b>
Theory Examination	25%
Practical Skills Test	45%
Internship & Project Viva	30%

## 77.3 Certification Outcome for 1 Year:

**“Certified Construction Fire & Safety Supervisor (Advanced Level) (Level 4.5)”**

Career Opportunities:

- Construction Site Safety Supervisor
- Site Fire Safety Officer
- Fire Watch Officer (Large Construction Projects)
- Safety Compliance Auditor (Entry Level)

## 78.0 Disaster Management & Emergency Response Assistant – 6 Months Program

**Duration:** 6 Months

**NCRF Level:** 3.5

**Total Hours:** 180 Hours

**Credit Equivalent:** 6 Credits

**Mode:** Blended (Theory + Practical Drills + Case Study Discussions)

**Outcome:** Foundational skills to assist during disasters, evacuations, and basic rescue operations

### 78.1 Unit-wise Syllabus

#### 78.1.1 Unit 1: Introduction to Disaster Management

**Duration:** 30 Hours (Theory: 25 | Practical: 5)

- What is a Disaster? Natural vs Man-made Disasters
- Importance of Preparedness and Mitigation
- Basic Disaster Management Cycle (Preparedness, Response, Recovery, Mitigation)

### **78.1.2 Unit 2: Types of Disasters and Risk Awareness**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Natural Disasters: Earthquake, Flood, Cyclone, Tsunami
- Man-made Disasters: Fire, Chemical Spill, Industrial Accidents
- Identifying Vulnerabilities

### **78.1.3 Unit 3: Emergency Response Principles**

**Duration:** 30 Hours (Theory: 15 | Practical: 15)

- Incident Command System (ICS) Basics
- Evacuation Planning and Execution
- Search and Rescue (Basic Introduction)

### **78.1.4 Unit 4: Basic First Aid and CPR Training**

**Duration:** 30 Hours (Theory: 10 | Practical: 20)

- Wound Management, Fracture Care, Bleeding Control
- CPR (Cardiopulmonary Resuscitation) Basics
- Disaster-Related Psychological First Aid (Intro)

### **78.1.5 Unit 5: Communication and Coordination during Disasters**

**Duration:** 30 Hours (Theory: 20 | Practical: 10)

- Emergency Communication Protocols
- Use of Radios, Sirens, Megaphones
- Community Coordination and Volunteering

### **78.1.6 Unit 6: Mini Project and Drill Simulation**

**Duration:** 30 Hours

- Conduct a Mock Disaster Drill (Evacuation or First Aid Setup)
- Prepare a Local Risk Assessment Report
- Final Practical Demonstration and Viva



## 78.2 Assessment for 6-Month Course

Component	Weightage
Theory Examination	30%
Practical Demonstration	50%
Project & Viva	20%

## 78.3 Certification Outcome for 6 Months:

**“Certified Disaster Management Assistant (Level 3.5)”**

Career Opportunities:

- Emergency Response Volunteer
- Disaster Shelter Support Worker
- Basic Risk Assessment Assistant

## 79.0 Disaster Management & Emergency Response Assistant – 1 Year Program

**Duration:** 1 Year

**NCRF Level:** 4.5

**Total Hours:** 360 Hours

**Credit Equivalent:** 12 Credits

**Mode:** Blended (Advanced Theory + Practical Drills + Field Internship)

**Outcome:** Skilled to assist in organized disaster management, community awareness, and emergency operations coordination

## 79.1 Unit-wise Syllabus

## Semester 1: Disaster Preparedness and Basic Response Systems

### **79.1.1 Unit 1: Advanced Concepts in Disaster Management**

**Duration:** 40 Hours

- Disaster Risk Reduction (DRR)
- Frameworks: Sendai Framework for Disaster Risk Reduction
- Role of NDRF, SDRF, NGOs

### **79.1.2 Unit 2: Disaster Risk Analysis and Vulnerability Mapping**

**Duration:** 50 Hours

- Hazard Mapping and Risk Assessment Techniques
- Urban and Rural Disaster Risk Profiles
- Community-Based Disaster Management (CBDM)

### **79.1.3 Unit 3: Emergency Response Strategies**

**Duration:** 50 Hours

- Triage and Mass Casualty Management Basics
- Emergency Logistics and Shelter Management
- Basic Structural and Non-Structural Mitigation Measures

## Semester 2: Practical Operations and Community Engagement

### **79.1.4 Unit 4: Incident Management System and ERT Activation**

**Duration:** 50 Hours

- Setting Up Emergency Response Teams (ERTs)
- Role of First Responders and Incident Controllers
- Command and Control Center Operations (Basics)

### **79.1.5 Unit 5: Communication, Psychosocial Care, and Public Awareness**

**Duration:** 60 Hours

- Disaster Communication Plans and Public Alert Systems
- Psychological First Aid in Disasters (Detailed)
- Public Awareness Campaigns and Education

### 79.1.6 Unit 6: Field Internship, Project Work and Viva

**Duration:** 40 Hours

- 1-Month Practical Internship (Government/NGO/Disaster Centre)
- Risk Mapping of Local Area + Evacuation Plan
- Final Project Report and Viva

## 79.2 Assessment for 1-Year Course

Component	Weightage
Theory Examination	25%
Practical Skills and Simulation Drills	45%
Internship & Project Viva	30%

## 79.3 Certification Outcome for 1 Year:

**“Certified Disaster Management & Emergency Response Assistant (Level 4.5)”**

Career Opportunities:

- Emergency Response Assistant (Government / NGO)
- Community Disaster Risk Reduction (CDRR) Volunteer
- Field Coordinator in Relief Camps
- First-Responder Training Assistant