



MALLA REDDY VISHWAVIDYAPEETH

(Deemed to be University)

Suraram X Roads, Jeedimetla, Hyderabad 500055

**School of Public Health, Emerging Healthcare & Technology
(SPHEHT)**

COURSE STRUCTURE & SYLLABUS DOCUMENT

B.Sc. Cosmetic and Aesthetic Skin Care Technology

Year 2025–29 Batch

Semester-wise Curriculum Structure (Scheme of Instruction)

L denotes lecture hours per week, T denotes tutorial hours per week, and P denote practical hours per week. All practicals are supervised or simulation-based unless otherwise stated.

Total Programme Credits: 205 across eight semesters, with credits per semester, in line with the UGC Curriculum and Credit Framework for a four-year undergraduate degree.

Year I —

Semester I

Sr.No	Category	Code	Course	L	T	P	Credits
1	Major	CAD6108101	Human Anatomy-I	4	0	0	4
2	Major	CAD6108102	Human Physiology-I	4	0	0	4
3	Minor	CAD6108103	Medical Biochemistry	4	0	0	4
4	MD	CAD6108104	Sociology	2	0	0	2
5	AEC	CAD6108105	English & Communication skills	1	0	2	2
6	SEC	CAD6108106	Basics of Computers	1	0	2	2
7	VAC		Environmental Awareness	2	0	0	2
			Total	19	0	4	20
			Total Contact Hours	25			20

Semester II —

Sr.No	Category	Code	Course	L	T	P	Credits
1	Major	CAD6108201	Basics of Dermatology & Dermatological disorders	4	0	2	5

2	Major	CAD6108202	Basics of Cosmetology	3	0	2	4
3	Major	CAD6108203	General Microbiology & Hygiene in cosmetology	3	0	2	4
4	Major	CAD6108204	General & Dermatological Pharmacology	3	0	0	3
5	SEC	CAD6108205	Cosmetic chemistry and Formulation	2	0	0	2
6	AEC		Stress Management	2	0	0	2
			Total	17	0	6	20
			Total Contact Hours	23			20

Year II —

Semester III

Sr.No	Category	Code	Course	L	T	P	Credits
1	Major		Skin Physiology and Cosmetic Skin Care Science	3	0	0	3
2	Major		Hair and Scalp Science and Cosmetic Hair Care Technology	4	0	0	4
3	Major		Cosmetic Formulation and Product Science — II	4	0	0	4
5	SEC		Nutrition and Wellness for Skin and Hair	2	0	0	2
6	CP		Clinical Postings-I	0	0	16	8
7	SEC		AI in Healthcare: Foundation	1	0	0	1

			Total	14	0	14	22
			Total Contact Hours	28		22	

Semester IV —

Sr.No	Category	Code	Course	L	T	P	Credits
1	Major		Common Skin and Hair Presentations: Recognition and Referral	4	0	0	4
2	Major		Client Assessment and Cosmetic Consultation Assistance	4	0	0	4
3	Major		Advanced Facial and Scalp Care Techniques-Assistive Role	4	0	0	4
4	Major		Superficial Cosmetic Peels and Resurfacing: Assistive Support	4	0	0	4
5	AEC		Client Communication, Documentation and Professional Ethics	4	0	0	4
6	CP		Clinical Postings-II	0	0	5	5
			Total	20	0	5	25
			Total Contact Hours	25		25	

Note on Semester IV: “Common Skin and Hair Presentations: Recognition and Referral” develops awareness of common presentations, contraindications and red-flag signs only, so that the technician can promptly alert and refer to the supervising Registered Medical Practitioner. It does not include diagnosis, prescription or treatment.

Year III —

Semester V

Sr.No	Category	Code	Course	L	T	P	Credits
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1	Major		Aesthetic Equipment Technology — I (Assistive Role)	4	0	0	4
2	Major		Light-Based and Laser Technology: Principles and Safety	4	0	0	4
3	Major		Energy-Based and Electrical Aesthetic Devices (Assistive Role)	4	0	0	4
4	Major		Infection Control and Procedure-Room Management in Aesthetic Practice	4	0	0	4
5	Major		Non-Invasive Skin Tightening and Body Contouring Technologies (Assistive Role)	4	0	0	4
6	CP		Clinical Postings-III	0	0	5	5
			Total	20	0	5	25
			Total Contact Hours	25			25

Semester VI —

Sr.No	Categor y	Code	Course	L	T	P	Credit s
1	Major		Aesthetic Equipment Technology — II (Advanced Assistive)	4	0	0	4
2	Major		Advanced Aesthetic Procedure Assistance and Integrated Protocols	4	0	0	4
3	Major		Assistance in Minor Aesthetic Procedures: Preparation, Support and Aftercare	4	0	0	4
4	Major		Hair and Scalp Aesthetic Procedure Assistance	4	0	0	4
5	Major		Research Methodology and Biostatistics	2	2	0	4
6	CP		Clinical Postings-IV	0	0	5	5
			Total	18	2	5	25

			Total Contact Hours	25	25
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Note on Semester VI: All light-based, laser, energy-based and injectable-adjacent content is confined to principles, classification, safety, room and client preparation, instrument and consumable readiness, maintenance, calibration, documentation and simulation-based practice. Any client-facing activity is performed strictly as an assistant, in the physical presence of and under the direct instruction of the supervising Registered Medical Practitioner.

Year IV —

Semester VII

Sr.No	Category	Code	Course	L	T	P	Credits
1	Major		Aesthetic Equipment Safety, Maintenance and Quality Assurance	4	0	0	4
2	Major		Ethics, Law and Scope of Practice for Aesthetic Technicians	4	0	0	4
3	INT		Clinical Internship I	2	0	20	22
4	RP		Project Work	0	0	06	06
			TOTAL	10	0	26	36
			Total Contact Hours	36			36

Semester VIII —

Sr. No	Category	Code	Course	L	T	P	Credits
1	INT		Clinical Internship II	2	20	0	22
2	RP		Project Work	0	06	0	06

3			TOTAL	2	26	0	28
			Total Contact Hours	28			28

Note on Semester VII and VIII: The internship is a Comprehensive Supervised Aesthetic Assistance Internship performed under the continuous, direct supervision of a Registered Medical Practitioner. It does not involve independent client care, diagnosis, prescription, treatment, or independent performance of any cosmetic or aesthetic procedure.

SEMESTER I

1. Human Anatomy

- **Objectives:** To build foundational knowledge of the structure and organisation of the human body, with emphasis on the systems relevant to cosmetic and aesthetic care assistance.

- **Outcomes:** Students will be able to identify anatomical structures, apply anatomical terminology in client positioning, and recognize major organ systems relevant to aesthetic practices.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: Introduction to the Human Body — Levels of organisation; anatomical terminology, planes and positions; introduction to the organ systems.
 - Unit II: Cells and Tissues — Structure of the human cell; epithelial, connective, muscular and nervous tissue; membranes and glands.
 - Unit III: Integumentary and Musculoskeletal Systems — Structure of skin, hair, nails and cutaneous glands; muscles of facial expression and mastication; bones of the skull, face and mandible relevant to aesthetic technique positioning.
 - Unit IV: Circulatory and Nervous Systems (Applied Overview) — Arterial and venous supply of the face and scalp; lymphatic drainage of the head and neck; trigeminal and facial nerve territories; anatomical danger zones relevant to aesthetic procedures.
- **Recommended Readings:** Standard textbooks of Human Anatomy for allied health sciences.

2. Human Physiology

- **Objectives:** To provide a working understanding of normal body function, particularly of the systems that influence skin and hair condition and client safety during cosmetic and aesthetic procedures.
- **Outcomes:** Students will understand normal body homeostasis, vital sign monitoring parameters, and physiological responses associated with client comfort and safety.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: Cell Physiology and Homeostasis — Membrane transport; body fluid compartments; homeostatic control; blood composition, coagulation and basic immunity.

- Unit II: Circulatory and Respiratory Physiology — Cardiac cycle; blood pressure regulation; pulse and respiration; relevance to client comfort, positioning and safety monitoring during procedures.
- Unit III: Nervous and Sensory Physiology — Neurons and nerve conduction; sensory receptors of the skin; pain physiology and its relevance to procedural comfort; overview of the autonomic nervous system and vasomotor responses.
- Unit IV: Endocrine Influences and Skin Function — Hormonal influences on skin and hair across puberty, pregnancy, menstrual cycle and ageing (awareness level); thermoregulation, sweat and sebum production; wound healing and its relevance to post-procedure care.
- **Recommended Readings:** Standard textbooks of Human Physiology for allied healthcare programmes.

3. Medical Biochemistry

- **Objectives:** To introduce the biochemical concepts that underlie skin, hair and nail composition and their interaction with cosmetic products and aesthetic procedures.
- **Outcomes:** Students will comprehend biomolecules, skin barrier lipids, keratin structure, enzyme functions, and surface pH balances.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA3 (Digital & Technological Literacy).
- **Units:**
 - Unit I: Biomolecules — Carbohydrates, proteins, lipids, vitamins and water balance relevant to skin and hair structure; nutritional influences and cutaneous manifestations of deficiency (awareness level).
 - Unit II: Skin Biochemistry — Keratinisation; collagen and elastin; melanin synthesis and pigmentation pathways (overview); composition of the lipid barrier of the epidermis.
 - Unit III: Hair and Nail Biochemistry — Hair keratin structure and disulphide bonding; biochemistry of the hair growth cycle (overview); nail plate composition and growth.
 - Unit IV: Enzymes, pH and Buffers — Enzyme fundamentals; skin surface pH and the acid mantle; buffer systems and their significance in cosmetic formulation and peel preparations.

- Unit V: Practical — Qualitative identification of carbohydrates, proteins and lipids; pH measurement of cosmetic preparations and skin-surface stimulants; demonstration of protein denaturation relevant to keratin science.
- **Recommended Readings:** Biochemistry reference manuals for skin and hair sciences.

4. Sociology

- **Objectives:** To understand societal dynamics, cultural perceptions of beauty, and social interactions relevant to public health and wellness settings.
- **Outcomes:** Students will develop sociological perspectives regarding body image, health disparities, and professional communication within multicultural environments.
- **Graduate Attributes Addressed:** GA5 (Effective Communication), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Standard foundational sociological concepts, cultural norms surrounding appearance, and social determinants of health.
- **Recommended Readings:** Introductory sociology textbooks.

5. English & Communication Skills

- **Objectives:** To build professional English proficiency and interpersonal communication skills required for client consultations and workplace coordination.
- **Outcomes:** Students will effectively communicate with clients and colleagues, write professional logs, and maintain clear documentation.
- **Graduate Attributes Addressed:** GA5 (Effective Communication).
- **Units:**
 - Professional verbal and written communication, listening skills, workplace correspondence, and basic documentation protocols.
- **Recommended Readings:** Professional communication and workplace English manuals.

6. Basics of Computers

- **Objectives:** To build computer and digital-tool competence needed for documentation, communication, and continuing learning.

- **Outcomes:** Students will operate office software, manage files securely, utilize digital record systems, and capture standard clinical photographs.
- **Graduate Attributes Addressed:** GA3 (Digital & Technological Literacy).
- **Units:**
 - Unit I: Computer Fundamentals — Operating systems, file management, hardware and software basics; safe computing practices.
 - Unit II: Office Applications — Word processing, spreadsheets and presentation software for records, inventory and reporting.
 - Unit III: Internet and Digital Communication — Professional email, credible online information sources, and navigation of the Learning Management System.
 - Unit IV: Digital Record-Keeping — Client-record and appointment software basics; standardized clinical photography for cosmetic documentation; consent for image use.
 - Unit V: Practical — Creating and maintaining a simulated client record; capturing and filing standardized before-and-after images; applying data-privacy and confidentiality safeguards.
- **Recommended Readings:** Basic computer literacy and digital documentation guides.

7. Environmental Awareness

- **Objectives:** To create awareness regarding environmental issues, sustainability, waste management, and ecological balance.
- **Outcomes:** Students will understand environmental protection protocols relevant to institutional and healthcare clinic settings.
- **Graduate Attributes Addressed:** GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Ecosystems, natural resources, environmental pollution, social issues, and sustainable practices.
- **Recommended Readings:** University-approved environmental studies course materials.

SEMESTER II

1. Basics of Dermatology & Dermatological Disorders

- **Objectives:** To build foundational knowledge of skin anatomy, physiology, common dermatological conditions, and clinical referral protocols.
- **Outcomes:** Students will recognize visible skin symptoms, understand skin aging and infections, and implement proper salon hygiene measures.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit 1: Structure, Function of Skin & Introduction to dermatology — Layers of skin, scope of dermatology, skin appendages, basic skin types, and referral rules.
 - Unit 2: Skin Physiology and Aging — Cell turnover, melanin production, TEWL, pH balance, intrinsic/extrinsic aging.
 - Unit 3: Common Skin Conditions and Disorders — Acne, eczema, psoriasis, pigment disorders, rosacea, skin infections, contact dermatitis, and UV damage.
 - Unit 4: Nutrition and Skin Health — Role of vitamins, minerals, hydration, and dietary impacts on skin.
 - Unit 5: Skin Care Principles and Hygiene — Cleansing, exfoliation, moisturization, sun protection, patch testing, and infection prevention.
- **Recommended Readings:** Standard introductory dermatology textbooks.

2. Basics of Cosmetology

- **Objectives:** To introduce core principles, professional ethics, and career scope of the beauty industry while building practical competencies in daily skin, hair, nail, and makeup care routines.
- **Outcomes:** Students will execute foundational CTM routines, basic facials, hair wash protocols, and basic aesthetic makeup under safe sanitary standards.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA9 (Entrepreneurship & Innovation Mindset).
- **Units:**
 - Unit 1: Introduction to Cosmetology — Definition, scope, hygiene, and professional ethics.

- Unit 2: Skin Care Basics — Skin types, analysis, CTM routine, exfoliation, and basic facials.
- Unit 3: Hair Care Fundamentals — Structure, scalp/hair analysis, treatments, and common disorders.
- Unit 4: Basic Makeup Techniques — Skin preparation, tools, step-by-step day/evening makeup, color theory.
- Unit 5: Nail and Hand Care — Nail anatomy, manicure/pedicure basics, nail hygiene.
- **Recommended Readings:** Professional cosmetology and beauty culture training manuals.

3. General Microbiology & Hygiene in Cosmetology

- **Objectives:** To cover pathogenic microorganisms and rigorous salon sanitation, disinfection, and sterilization standards.
- **Outcomes:** Students will identify contamination risks, execute disinfection protocols, and comply with workplace safety and health codes.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - UNIT 1: Introduction to Microbiology — Classification of microorganisms, growth requirements, and effects on skin/hair.
 - UNIT 2: Pathogenic Microorganisms and Infections — Salon pathogens, transmission modes, and signs of infection.
 - UNIT 3: Principles of Hygiene and Sanitation — Definitions of sterilization, disinfection, antiseptics, and safe environmental practices.
 - UNIT 4: Sterilization and Disinfection Methods — Physical methods, chemical disinfectants, autoclaves, and dry heat sterilizers.
 - UNIT 5: Health, Safety, and Regulatory Guidelines — PPE usage, waste disposal, contraindications, first aid, and health codes.
- **Recommended Readings:** Microbiology and infection control standards for aesthetic practices.

4. General & Dermatological Pharmacology

- **Objectives:** To examine general pharmacological principles, routes of administration, and specialized skin therapeutics.
- **Outcomes:** Students will understand drug administration routes, dermatological medications, anti-inflammatories, acne drugs, and cosmetic safety considerations.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: General pharmacology & routes of drug administration.
 - Unit II: Drugs acting on skin, antibiotics, and antifungals.
 - Unit III: Adverse drug reactions.
 - Unit IV: Anti-inflammatory drugs, antihistamines, and steroids.
 - Unit V: Acne medications, dermatological pharmacology, and cosmetic drug safety.
- **Recommended Readings:** Standard pharmacology and dermatological therapeutics textbooks.

5. Cosmetic Chemistry and Formulation

- **Objectives:** To explore the chemical principles, active ingredients, and formulation science behind skin and personal care products.
- **Outcomes:** Students will analyze cosmetic labels, understand emulsions and surfactants, and perform basic physicochemical testing.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA3 (Digital & Technological Literacy).
- **Units:**
 - UNIT 1: Fundamentals of Cosmetic Chemistry — Classification, pH, emulsions, surfactants, and preservatives.
 - UNIT 2: Ingredients Used in Cosmetic Products — Actives, emollients, humectants, thickeners, colorants, and natural ingredients.
 - UNIT 3: Formulation of Skin Care Products — Cleansers, toners, moisturizers, serums, sunscreens, and stability factors.
 - UNIT 4: Hair and Personal Care Formulations — Shampoos, conditioners, hair dyes, soaps, and body washes.

- UNIT 5: Testing and Quality Control in Cosmetics — Physicochemical testing, microbial load, patch testing, and regulatory compliance (BIS/FDA).
- **Recommended Readings:** Cosmetic chemistry and formulation reference texts.

6. Stress Management

- **Objectives:** To examine the biological, psychological, and behavioral dimensions of stress and its impact on overall well-being.
- **Outcomes:** Students will identify personal stress triggers, apply effective coping strategies, and cultivate resilience and work-life balance.
- **Graduate Attributes Addressed:** GA10 (Lifelong Learning & Self-Directed Growth).
- **Units:**
 - Unit 1: Introduction to Stress and Its Effects — Eustress vs. distress, fight-or-flight biology, health effects.
 - Unit 2: Identifying Stressors and Personal Stress Responses — Internal vs. external stressors, emotional regulation.
 - Unit 3: Coping Strategies and Stress Relief Techniques — CBT techniques, relaxation, time management.
 - Unit 4: Lifestyle Changes for Managing Stress — Exercise, sleep hygiene, nutrition, mindfulness.
 - Unit 5: Stress Management at Work and School — Prioritization, burnout avoidance, self-care.
 - Unit 6: Building Long-Term Stress Resilience — Growth mindset and emotional intelligence.
- **Recommended Readings:** Literature on behavioral psychology and stress resilience.

SEMESTER III

1. Skin Physiology and Cosmetic Skin Care Science

- **Objectives:** To deepen understanding of skin physiology and apply it to the science of supervised cosmetic skin care.
- **Outcomes:** Students will assess skin types non-diagnostically, understand barrier function, and apply cleansing, exfoliation, and hydration protocols safely.

- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: Skin Barrier Function — Barrier lipids, water loss, hydration principles, barrier compromise, and repair.
 - Unit II: Skin Typing and Cosmetic Assessment — Non-diagnostic assessment of oily, dry, combination, and sensitive skin; imaging tools.
 - Unit III: Cleansing and Exfoliation Science — Mechanical and chemical exfoliation principles, indications, and limitations at an assistive level.
 - Unit IV: Hydration, Barrier Support and Photoprotection — Moisturisation science, occlusion, post-procedure barrier support, sun-protection counseling.
 - Unit V: Practical / OSCE — Identification of skin types, demonstration of cleansing, exfoliation, hydration, and photoprotection sequences.
- **Recommended Readings:** Advanced skin physiology and aesthetic skincare literature.

2. Hair and Scalp Science and Cosmetic Hair Care Technology

- **Objectives:** To build knowledge and supervised technique skill related to cosmetic hair and scalp care.
- **Outcomes:** Students will analyze scalp conditions, execute proper hair care routines, apply treatments with safety discipline, and document pre- and post-procedure states.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA5 (Effective Communication).
- **Units:**
 - Unit I: Scalp Health Fundamentals — Scalp structure, sebum balance, common presentations, assessment methods.
 - Unit II: Hair Care Technique Science — Cleansing, conditioning, detangling, scalp massage, and damage prevention.
 - Unit III: Hair Types, Texture and Treatments — Classification systems, technique adaptation, and safety considerations.
 - Unit IV: Product Application for Hair and Scalp — Supervised application, patch-testing support, timing, rinsing, and neutralization discipline.

- Unit V: Practical Application — Client preparation, draping, procedure support, and documentation.
- **Recommended Readings:** Trichology and cosmetic hair care reference guides.

3. Cosmetic Formulation and Product Science — II

- **Objectives:** To extend formulation knowledge to intermediate product categories and processes used in aesthetic practice.
- **Outcomes:** Students will formulate serums/creams, handle cosmetic actives safely, and understand batch documentation and stability testing.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA9 (Entrepreneurship & Innovation Mindset).
- **Units:**
 - Unit I: Emulsion and Delivery Systems — O/W and W/O systems, stability factors, encapsulation, and delivery vehicles.
 - Unit II: Cosmetic Actives — Hydroxy acids, retinoids, vitamin C, niacinamide, peptides, and botanical actives.
 - Unit III: Process Technology — Mixing, heating, cooling, in-process controls, and batch documentation.
 - Unit IV: Packaging and Stability — Packaging compatibility, preservation, and accelerated stability testing.
 - Unit V: Practical — Preparation of a serum/cream prototype, sensory evaluation, and structured reporting.
- **Recommended Readings:** Advanced cosmetic formulation and manufacturing texts.

4. Nutrition and Wellness for Skin and Hair

- **Objectives:** To provide awareness-level understanding of the role of nutrition, lifestyle, and general wellness in skin and hair condition.
- **Outcomes:** Students will understand macronutrients and micronutrients, recognize the limits of dietary advice within their role, and support practitioner-approved education.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**

- Unit I: Nutrition Fundamentals — Macronutrients, micronutrients, and hydration relevant to skin, hair, and nails.
- Unit II: Nutrition and Appearance (Awareness Level) — Non-clinical associations between diet and appearance; scope limitations.
- Unit III: Lifestyle and Wellness Factors — Sleep, physical activity, and stress contributions.
- Unit IV: Client Education Support — Reinforcing practitioner-approved wellness guidance and escalating out-of-scope requests.
- Unit V: Practical — Case discussions and role-play in supporting wellness education.
- **Recommended Readings:** Nutritional science and wellness publications.

5. Clinical Postings-I

- **Objectives:** To orient students to a live aesthetic care setting, building foundational observation, hygiene, and basic facial/body-care assistance skills.
- **Outcomes:** Students will maintain strict facility hygiene, assist in client reception and documentation, and execute basic supervised care tasks.
- **Graduate Attributes Addressed:** GA5 (Effective Communication), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Orientation and Facility Familiarisation — Layout, zoning, dress code, conduct policy, and scope statement.
 - Unit II: Hygiene, Infection Control and Client Reception Assistance — PPE use, intake documentation, consent handling, and workstation maintenance.
 - Unit III: Observation of Basic Cosmetic Care Procedures — Observing facials, body-care, and manicures/pedicures with logbook entries.
 - Unit IV: Supervised Assistance in Basic Procedures — Graduated, directly supervised assistance in client preparation and basic technique steps.
 - Unit V: Reflective Practice and Documentation — Daily logbooks, reflective notes, and skill checklists.
- **Recommended Readings:** Clinical guidelines and standard operating procedures for aesthetic clinics.

6. AI in Healthcare: Foundation

- **Objectives:** Explain fundamental AI concepts, examine healthcare use cases, evaluate performance metrics, apply ethical/legal principles, and use no-code platforms.
- **Outcomes:** Students will explain AI concepts, identify healthcare use cases, critically evaluate AI tools, apply governance frameworks, and design no-code solutions.
- **Graduate Attributes Addressed:** GA1, GA2, GA3, GA5, GA7, GA9, GA10.
- **Units:**
 - Unit I: Introduction to AI and Health Data — Definitions, ML vs. DL, health data taxonomy (EHR, imaging, genomics), data quality.
 - Unit II: AI Applications Across Healthcare Domains — Medical imaging, CDSS, NLP, generative AI, drug discovery, and hospital operations.
 - Unit III: Evaluating AI Performance, Bias, and Validation — Accuracy, sensitivity, specificity, overfitting, clinical validation, and algorithmic bias.
 - Unit IV: Ethics, Law, and Healthcare AI Governance — Privacy, HIPAA, GDPR, India's DPDP Act, fairness, accountability, and human-in-the-loop.
 - Unit V: Responsible Practice and Capstone Project — Prompt engineering, hallucinations, future trajectories, and capstone presentation.
- **Recommended Readings:**
 - Topol, E. (2019). *Deep Medicine*. Basic Books.
 - WHO (2021). *Ethics and governance of artificial intelligence for health*.
 - Government of India (2023). *Digital Personal Data Protection Act*.

SEMESTER IV

1. Common Skin and Hair Presentations: Recognition and Referral

- **Objectives:** To develop the ability to recognize common skin and hair presentations and red-flag signs for referral without independent diagnosis.
- **Outcomes:** Students will identify common presentations and absolute/relative contraindications, executing correct referral protocols.
- **Graduate Attributes Addressed:** GA2 (Critical Thinking & Problem Solving), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Overview of Common Presentations — Non-diagnostic awareness of acne, pigmentation, sensitivity, and hair loss.

- Unit II: Red-Flag Signs — Rapidly changing lesions, signs of infection, severe reactions, and acute deterioration.
- Unit III: Contraindications — Absolute and relative contraindications requiring practitioner clearance.
- Unit IV: Referral Protocol and Documentation — Standard referral pathways and handover discipline.
- Unit V: Practical — Simulated case exercises in non-diagnostic recognition and referral decision-making.
- **Recommended Readings:** Clinical recognition and triage guidelines for skin assistants.

2. Client Assessment and Cosmetic Consultation Assistance

- **Objectives:** To build supervised assistive competence in client assessment, consultation support, and treatment-record preparation.
- **Outcomes:** Students will record client-administered histories, manage standardized imaging, and support practitioner-led consultations.
- **Graduate Attributes Addressed:** GA3 (Digital & Technological Literacy), GA5 (Effective Communication).
- **Units:**
 - Unit I: Client Intake and History (Assistive) — Structured recording of history, medication, and allergies.
 - Unit II: Assessment Tools and Imaging — Skin-type charts, assessment forms, and standardized clinical photography.
 - Unit III: Consultation Support — Assisting practitioner-led consultations, informed consent, and plan preparation.
 - Unit IV: Post-Procedure Care and Follow-Up — Delivering approved aftercare instructions and scheduling reviews.
 - Unit V: Practical — Integrated simulated consultations covering intake, imaging, and documentation.
- **Recommended Readings:** Aesthetic consultation and medical documentation standards.

3. Advanced Facial and Scalp Care Techniques

- **Objectives:** To develop advanced supervised technique competence across combined facial and scalp cosmetic care procedures.
- **Outcomes:** Students will execute multi-step facial protocols, advanced scalp treatments, and maintain quality assurance standards.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: Advanced Facial Techniques — Multi-step facial protocols, lymphatic drainage, and adaptation for sensitive skin.
 - Unit II: Advanced Scalp Techniques — Scalp cleansing, exfoliation, treatment application, and massage.
 - Unit III: Combination Protocols — Safe combination and sequencing of techniques within one session.
 - Unit IV: Quality and Consistency — Standard operating procedures, checklists, and outcome documentation.
 - Unit V: Practical — Capstone supervised sessions integrating advanced facial and scalp protocols.
- **Recommended Readings:** Advanced aesthetics procedural manuals.

4. Superficial Cosmetic Peels and Resurfacing: Assistive Support

- **Objectives:** To build assistive competence in supporting practitioner-led superficial cosmetic peel and resurfacing procedures.
- **Outcomes:** Students will prepare trays and agents, support intra-procedure timing and neutralization, and recognize adverse responses.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Science of Superficial Peels — Agent categories, concentration, pH, and expected endpoints.
 - Unit II: Client and Room Preparation — Priming instructions, contraindication screening, and tray setup.
 - Unit III: Intra-Procedure Assistance — Timing, handling agents, comfort reassurance, and endpoint reporting.

- Unit IV: Aftercare and Complication Awareness — Approved aftercare, recognizing adverse responses, and escalation.
- Unit V: Practical — Simulation-based peel-assistance drills, timing discipline, and escalation practice.
- **Recommended Readings:** Guidelines on chemical peels and resurfacing safety.

5. Client Communication, Documentation and Professional Ethics

- **Objectives:** To build professional communication, documentation, and ethical-practice competence appropriate to the aesthetic technician role.
- **Outcomes:** Students will manage client expectations empathetically, support consent processes, maintain accurate records, and respect scope boundaries.
- **Graduate Attributes Addressed:** GA5 (Effective Communication), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Client Communication — Empathetic communication, expectation management, and difficult conversations.
 - Unit II: Consent and Confidentiality — Supporting informed consent, photography consent, and data protection.
 - Unit III: Documentation Standards — Accurate records, procedure logs, correction, and retention.
 - Unit IV: Professional Ethics and Scope Discipline — Role boundaries, refusing out-of-scope requests, and ethical marketing.
 - Unit V: Practical — Role-plays covering expectations, consent support, and session documentation.
- **Recommended Readings:** Professional ethics and medical legal frameworks in aesthetics.

6. Clinical Postings-II

- **Objectives:** To build supervised competence in client assessment assistance, documentation, and intermediate facial/scalp technique support.
- **Outcomes:** Students will assist during consultations, recognize red-flag signs, support intermediate facial/scalp techniques, and deliver aftercare.

- **Graduate Attributes Addressed:** GA5 (Effective Communication), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Consultation Assistance — Recording history, expectations, and standardized photography without diagnosis.
 - Unit II: Recognition and Referral Practice — Exposure to skin/hair presentations and immediate reporting of red flags.
 - Unit III: Intermediate Facial and Scalp Technique Assistance — Manual techniques, mask application, and steam procedures.
 - Unit IV: Superficial Peel Assistance — Tray preparation, timing support, endpoint observation, and neutralization.
 - Unit V: Aftercare Delivery and Documentation — Delivering aftercare instructions and completing session logs.
- **Recommended Readings:** Clinical posting handbooks and logbooks.

SEMESTER V

1. Aesthetic Equipment Technology — I (Assistive)

- **Objectives:** To introduce principles, safe handling, and assistive operation of equipment commonly used in cosmetic and aesthetic practice.
- **Outcomes:** Students will understand equipment categories, electrical safety, assistive setup, and routine maintenance/fault reporting.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA3 (Digital & Technological Literacy).
- **Units:**
 - Unit I: Equipment Categories — Steamers, magnifying units, brushing/vacuum units, galvanic/high-frequency, and micro-resurfacing systems.
 - Unit II: Electrical Safety — Safety principles, earthing, fuses, cable management, and hazard recognition.
 - Unit III: Assistive Operation — Pre-use checks, parameter setup as directed, positioning, and procedure support.

- Unit IV: Cleaning, Maintenance and Fault Reporting — Manufacturer cleaning, consumable replacement, and fault logging.
- Unit V: Practical — Supervised simulated equipment setup, assistance, and post-use decontamination.
- **Recommended Readings:** Aesthetic device operations and electrical safety manuals.

2. Light-Based and Laser Technology: Principles and Safety

- **Objectives:** To provide theoretical knowledge of light-based and laser technology principles and safety at an assistive-support level.
- **Outcomes:** Students will understand laser physics, device classes, safety protocols, and strict assistive boundaries.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Physics of Light and Laser — Wavelength, fluence, pulse duration, selective photothermolysis, and chromophores.
 - Unit II: Device Classification and Standards — Laser hazard classes, IPL systems, and safety standards.
 - Unit III: Safety Protocols — Eye protection, plume/fire safety, skin cooling, and emergency shutdown.
 - Unit IV: Assistive Role Boundaries — Strict boundaries of preparation and documentation; no independent delivery.
 - Unit V: Practical — Simulated controlled-area setup, eyewear verification, and safety-drill execution.
- **Recommended Readings:** Laser safety standards (ANSI/IEC) and medical laser guidelines.

3. Energy-Based and Electrical Aesthetic Devices (Assistive)

- **Objectives:** To extend equipment competence to radiofrequency, ultrasound, and other energy-based devices.
- **Outcomes:** Students will recognize device categories, implement safety/contraindication checks, and assist in setup and support.

- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: Device Categories — Radiofrequency, focused/non-focused ultrasound, microcurrent, and cryolipolysis.
 - Unit II: Safety and Contraindication Awareness — Implants, pregnancy, and medication clearance checks.
 - Unit III: Assistive Setup and Support — Coupling media, applicator preparation, draping, and comfort monitoring.
 - Unit IV: Maintenance, Calibration and Fault Reporting — Routine checks, calibration awareness, and fault escalation.
 - Unit V: Practical — Supervised simulated setup, support, and fault-reporting exercises.
- **Recommended Readings:** Energy-based aesthetic device user manuals and safety guides.

4. Infection Control and Procedure-Room Management in Aesthetic Practice

- **Objectives:** To build competence in managing a safe, compliant, and well-organised aesthetic procedure environment.
- **Outcomes:** Students will maintain room standards, reprocess instruments, manage sharps and waste safely, and participate in emergency preparedness.
- **Graduate Attributes Addressed:** GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Procedure-Room Standards — Zoning, workflow, ventilation, lighting, and sterile item storage.
 - Unit II: Instrument Reprocessing — Cleaning, packing, sterilization, validation records, and single-use policy.
 - Unit III: Sharps and Waste Management — Sharps handling, needle-stick prevention, and biomedical waste segregation.
 - Unit IV: Emergency Preparedness — Emergency trolleys, oxygen, basic life support, and fire safety.
 - Unit V: Practical — Procedure-room turnover drill, sterilization documentation, and emergency response simulation.

- **Recommended Readings:** Hospital infection control and biomedical waste management rules.

5. Non-Invasive Skin Tightening and Body Contouring Technologies (Assistive)

- **Objectives:** To build awareness of and assistive competence in supporting non-invasive aesthetic body contouring and tightening technologies.
- **Outcomes:** Students will understand modalities, provide session support, perform measurement and marking, and deliver aftercare.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA5 (Effective Communication).
- **Units:**
 - Unit I: Overview of Modalities — Non-invasive skin tightening and body contouring technologies.
 - Unit II: Mechanism Overview — Non-clinical mechanism-of-action awareness and realistic expectations.
 - Unit III: Assistive Session Support — Measurement, marking, positioning, applicator preparation, and comfort monitoring.
 - Unit IV: Client Safety and Aftercare — Pre-session safety checks, adverse response recognition, and aftercare.
 - Unit V: Practical — Supervised assistive session setup, support, and documentation.
- **Recommended Readings:** Non-invasive body contouring device literature.

6. Clinical Postings-III

- **Objectives:** To build supervised, non-operative equipment-assistance competence across aesthetic devices, infection control, and body-contouring modalities.
- **Outcomes:** Students will manage sterile fields, assist in laser and energy-based device sessions, support body contouring, and execute emergency drills.
- **Graduate Attributes Addressed:** GA2 (Critical Thinking & Problem Solving), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Procedure-Room and Sterile-Field Readiness — Room turnover and instrument reprocessing support.

- Unit II: Light-Based and Laser Device Assistance — Controlled-area setup, eyewear verification, and session documentation.
- Unit III: Energy-Based Device Assistance — Coupling media, applicator prep, and comfort monitoring.
- Unit IV: Body Contouring Session Support — Measurement, marking, and aftercare delivery.
- Unit V: Emergency and Incident-Response Drills — Trolley checks, mock adverse events, and incident report completion.
- **Recommended Readings:** Clinical procedure protocols and safety checklists.

SEMESTER VI

1. Aesthetic Equipment Technology — II (Advanced Assistive)

- **Objectives:** To consolidate advanced supervised equipment-assistance competence across the full range of aesthetic device categories.
- **Outcomes:** Students will manage multi-device sessions, troubleshoot basic equipment issues, and execute escalation pathways.
- **Graduate Attributes Addressed:** GA2 (Critical Thinking & Problem Solving), GA3 (Digital & Technological Literacy).
- **Units:**
 - Unit I: Consolidated Device Overview — Comparative overview of optical, energy-based, and mechanical platforms.
 - Unit II: Advanced Assistance Protocols — Standard operating procedures for multi-device sessions and parameter documentation.
 - Unit III: Troubleshooting and Escalation — Recognizing device malfunction and adverse responses with rapid escalation.
 - Unit IV: Multi-Device Session Support — Supporting sequenced sessions and preventing cross-contamination.
 - Unit V: Practical — Comprehensive supervised evaluation of assistance competence across multiple device categories.
- **Recommended Readings:** Advanced aesthetic equipment management guides.

2. Advanced Aesthetic Procedure Assistance and Integrated Protocols

- **Objectives:** To consolidate advanced, supervised assistance competence across integrated cosmetic and aesthetic procedure protocols.
- **Outcomes:** Students will support multi-modality protocol designs, maintain high-throughput standards, and support internal audits.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA2 (Critical Thinking & Problem Solving).
- **Units:**
 - Unit I: Integrated Protocol Design (Assistive) — Supporting combination protocols, sequencing, and interaction awareness.
 - Unit II: Advanced Assistance Standards — Standard operating procedures, time-motion discipline, and quality benchmarks.
 - Unit III: Complication Preparedness — Recognizing and responding to adverse events across procedures.
 - Unit IV: Outcome Documentation and Audit — Standardized imaging, tracking, and internal audit support.
 - Unit V: Practical — Comprehensive supervised assessment across integrated assistance scenarios.
- **Recommended Readings:** Integrated aesthetic treatment guidelines.

3. Assistance in Minor Aesthetic Procedures: Preparation, Support and Aftercare

- **Objectives:** To build strictly assistive competence in preparing for, supporting, and following up practitioner-performed minor cosmetic procedures.
- **Outcomes:** Students will prepare sterile trays, assist during minor procedures while maintaining sterile fields, and adhere to strict non-injection boundaries.
- **Graduate Attributes Addressed:** GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Procedure Overview — Awareness-level overview of minor aesthetic procedures performed by physicians.
 - Unit II: Pre-Procedure Preparation — Consent verification, topical anesthetic application, and sterile tray preparation.
 - Unit III: Intra-Procedure Assistance — Maintaining sterile fields, passing instruments, and recording parameters/lot numbers.

- Unit IV: Aftercare and Complication Recognition — Post-procedure care, recognizing adverse responses, and escalation.
- Unit V: Practical — Simulation drills on tray prep, assistance sequencing, and escalation (strict non-injection policy).
- **Recommended Readings:** Minor surgical assistance and sterile technique manuals.

4. Hair and Scalp Aesthetic Procedure Assistance

- **Objectives:** To build supervised assistive competence in hair and scalp aesthetic procedures performed by the practitioner.
- **Outcomes:** Students will assist in hair-loss assessments, non-surgical scalp procedures, hair restoration support, and hair removal sessions.
- **Graduate Attributes Addressed:** GA1 (Disciplinary & Interdisciplinary Knowledge), GA5 (Effective Communication).
- **Units:**
 - Unit I: Hair-Loss Assessment Support — Assistive documentation of hair loss patterns, imaging, and hair counts.
 - Unit II: Non-Surgical Procedure Assistance — Room, consumable, and client preparation for scalp procedures.
 - Unit III: Hair Restoration Procedure Support — Sterile-field maintenance and instrument handling during restoration procedures.
 - Unit IV: Cosmetic Hair Removal Technologies — Assistive support for hair removal sessions, safety checks, and eye protection.
 - Unit V: Practical — Simulation-based assistance drills across hair and scalp procedures.
- **Recommended Readings:** Hair restoration and trichology procedure assistant guides.

5. Research Methodology and Biostatistics

- **Objectives:** To build basic research methodology and biostatistics skills required for quality work and the final-year project.
- **Outcomes:** Students will formulate research questions, collect data ethically, apply descriptive statistics, and draft a complete research proposal.
- **Graduate Attributes Addressed:** GA2 (Critical Thinking & Problem Solving), GA10 (Lifelong Learning & Self-Directed Growth).

- **Units:**
 - Unit I: Research Fundamentals — Research types, problem identification, literature reviews, and referencing.
 - Unit II: Data Collection — Surveys, structured observation, and study design in aesthetic sciences.
 - Unit III: Biostatistics — Descriptive statistics, data presentation, and tests of significance.
 - Unit IV: Research Ethics and Reporting — Ethical clearance, consent, plagiarism, and dissertation conventions.
 - Unit V: Practical — Drafting a complete research proposal for the final-year project.
- **Recommended Readings:** Research methodology and biostatistics textbooks for health sciences.

6. Clinical Postings-IV

- **Objectives:** To consolidate advanced, supervised assistance competence across integrated equipment, minor-procedure, and hair/scalp procedure categories.
- **Outcomes:** Students will demonstrate readiness for clinical internships through multi-device assistance, sterile procedure support, and complication escalation drills.
- **Graduate Attributes Addressed:** GA2 (Critical Thinking & Problem Solving), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Multi-Device Session Assistance — Supporting sequenced device sessions with cross-contamination prevention.
 - Unit II: Minor Aesthetic Procedure Assistance — Sterile tray preparation and intra-procedure support (strictly non-invasive).
 - Unit III: Hair and Scalp Procedure Assistance — Imaging, hair count documentation, and procedure support.
 - Unit IV: Complication Recognition and Escalation — Practicing escalation pathways for adverse responses.
 - Unit V: Comprehensive Skill Consolidation — Supervisor-assessed skill demonstration for internship readiness.
- **Recommended Readings:** Clinical competency assessment checklists and logbooks.

SEMESTER VII

1. Aesthetic Equipment Safety, Maintenance and Quality Assurance

- **Objectives:** To build competence in equipment safety management, preventive maintenance, and quality assurance in an aesthetic facility.
- **Outcomes:** Students will conduct risk assessments, plan preventive maintenance, verify calibration, and manage incident reporting.
- **Graduate Attributes Addressed:** GA2 (Critical Thinking & Problem Solving), GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Safety Management Systems — Risk assessment, hazard registers, and safety principles for equipment.
 - Unit II: Preventive Maintenance — Scheduled maintenance planning, service contracts, and consumable inventory.
 - Unit III: Calibration and Quality Checks — Output verification, routine quality checks, and acceptance criteria.
 - Unit IV: Incident Reporting and Compliance — Near-miss reporting, adverse event documentation, and accreditation standards.
 - Unit V: Practical — Supervised mock equipment-safety audit consolidating maintenance and calibration practice.
- **Recommended Readings:** Medical device maintenance and quality assurance standards.

2. Ethics, Law and Scope of Practice for Aesthetic Technicians

- **Objectives:** To consolidate legal, ethical, and scope-of-practice knowledge essential to safe and compliant technician practice.
- **Outcomes:** Students will apply bioethical principles, understand consumer and data protection laws, recognize liability, and respect scope boundaries.
- **Graduate Attributes Addressed:** GA7 (Ethical Reasoning & Professional Integrity).
- **Units:**
 - Unit I: Professional Ethics — Autonomy, beneficence, non-maleficence, justice, and professional boundaries.

- Unit II: Legal Framework — Consumer Protection Act, data protection, workplace safety, advertising regulation, and unauthorized practice laws.
- Unit III: Scope of Practice and Liability — Reinforcing scope boundaries, delegation doctrine, and personal liability.
- Unit IV: Case Studies and Ethical Decision-Making — Case analyses of scope, consent, and outcome disputes.
- Unit V: Consolidated Case-Based Assessment — Evaluating ethical and legal judgment.
- **Recommended Readings:** Medical law, ethics, and consumer protection acts.

3. Supervised Clinical Assistance Internship — I

- **Objectives:** Supervised, assistive exposure to a cosmetic and aesthetic care work setting under a Registered Medical Practitioner.
- **Outcomes:** Students will apply assistive skills safely in a live clinical environment under continuous supervision without independent practice authority.
- **Graduate Attributes Addressed:** All Graduate Attributes (GA1 to GA10).
- **Units:**
 - Guideline 1: Placement only in approved facilities with a continuously available supervising Physician.
 - Guideline 2: Maintenance of a daily logbook of assistive tasks, countersigned by the supervisor.
 - Guideline 3: Absolute prohibition on independent client-facing procedures or prescriptions.
 - Guideline 4: Evaluation via supervisor reports, logbook assessments, and institutional viva-voce.
- **Recommended Readings:** Clinical internship handbooks and institutional procedural protocols.

4. Project Work (Part I)

- **Objectives:** To apply research methodology and scientific inquiry to a selected topic in aesthetic skincare technology.
- **Outcomes:** Students will execute data collection, analyze findings, and begin drafting their dissertation project.

- **Graduate Attributes Addressed:** GA2, GA3, GA5, GA10.
- **Units:**
 - Execution of research proposal, data gathering, initial analysis, and periodic progress reporting.
- **Recommended Readings:** Research project guidelines and literature specific to the research topic.

SEMESTER VIII

1. Supervised Clinical Assistance Internship — II

- **Objectives:** Advanced supervised, assistive placement in an approved aesthetic facility to consolidate clinical assistant competencies.
- **Outcomes:** Students will master routine workflow support, safety compliance, and patient communication under direct medical supervision.
- **Graduate Attributes Addressed:** All Graduate Attributes (GA1 to GA10).
- **Units:**
 - Comprehensive full-time supervised clinical assistance rotation across advanced aesthetic procedures, device maintenance, and client documentation under a Registered Medical Practitioner.
- **Recommended Readings:** Advanced clinical placement guides and hospital safety manuals.

2. Project Work (Part II)

- **Objectives:** To complete the final research dissertation, present findings, and defend the project.
- **Outcomes:** Students will finalize their written research report and present their findings in a viva-voce examination.
- **Graduate Attributes Addressed:** GA2, GA3, GA5, GA10.
- **Units:**
 - Final data analysis, report writing, thesis binding, and oral presentation/defense.
- **Recommended Readings:** Academic writing and thesis presentation standards.