

Batch 1
2024



Certificate course in Aesthetic Medicine

Study guide

Department of Dermatology and Aesthetic Medicine
Rawalpindi Medical University

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University Mission and Vision

Mission Statement of Rawalpindi Medical University

To impart evidence-based research-oriented health professional education in order to provide best possible patient care and inculcate the values of mutual respect, ethical practice of healthcare and social accountability.

Vision & Values of Rawalpindi Medical University

Highly recognized and accredited center of excellence in Medical Education, using evidence-based training techniques for development of highly competent health professionals, who are lifelong experiential learner and are socially accountable.

Needs Assessment of Certificate course in Aesthetic Medicine

Aesthetic Medicine is an evolving field. The purpose of this course is to provide a structured training and establish a solid foundation which can help the learner to enhance his knowledge and skills of aesthetic medicine.

Goal of Certificate Course in Aesthetic Medicine

The goal of this 6 months Certificate program is to develop graduates who will be better and safe practitioners. Introduction of such structured courses in Aesthetic Medicine will help revitalize the future of Aesthetic Medicine in Pakistan.

Program Objectives

On completion of the course, one will be able to demonstrate a number of competencies and have enhanced knowledge and skills including:

- application of skin anatomy and science in relation to aesthetics and ageing
- the ability to assess patients' requirements and suitability for aesthetic intervention
- application of consent and ethical practice in aesthetic medicine
- explaining clinical malpractice and legislation of manufacturing of drugs and devices in the aesthetic field of practice
- procedural skills in minimally invasive aesthetic procedures including rejuvenation techniques, dermal fillers, botulinum toxin injections and some lasers
- assessment and treatment of complications of these procedures
- advising on the role of invasive aesthetic procedures
- developing an evidence-based approach to aesthetic medicine and practice critically appraising and conducting high quality research in aesthetic and anti-ageing medicine

Faculty

Patron in Chief:	Prof. Dr. Muhammad Umar (Vice Chancellor RMU)
Program Director:	Dr. Shawana Sharif
Program coordinator:	Dr. Abdul Quddus Butt

Institutional Faculty

Dr. Hasnain

Dr. Shawana Sharif

Dr. Arsalan Manzoor

Dr. Mudassira Zahid

Dr. Zainab Tariq

Dr. Nausheen

International Faculty

Dr. Babar Rao

Dr. Iram Ashraf

Dr. Izabela Zaleska

Guest Faculty

Dr. Riffat Yasmeen

Col. Dr. Sakina Sadiq

Dr. Sumaira Abdullah

Dr. Asma Kiani

Dr. Shafia Mudassar

Dr. Sadia Cheema

Dr. Shyna Shahid

Dr. Sania Javed

Statutes and Regulations

General Regulations

- (i) The CAM program shall be of 6 months duration
- (ii) Each CAM student shall follow the Syllabi and Courses of Studies as may be prescribed by the Academic Council from time to time
- (iii) The candidate shall be awarded the certificate of CAM after successful completion of all courses of study, qualifying all examinations and fulfilling all other requirements of the course.

Regulations for Admission

- (i) All the admission process will be coordinated and organized by the Department of Dermatology and Aesthetic Medicine.
- (ii) There shall be an Admission Committee to supervise admissions.
- (iii) Admissions shall be made on the basis of merit
- (iv) The Vice Chancellor shall finally approve the admissions only in the light of recommendations made by the admission committee.
- (v) To be eligible for admission to CAM, a candidate shall possess an MBBS / BDS degree.
- (vi) The number of students each year for admission in each discipline shall be decided by a committee comprising the Vice Chancellor (Chairperson), Director Medical Education
- (vii) The Heads of the Departments, each year, shall communicate for approval of the Admission Committee prior to the admissions, the total number of seats for students to be admitted. This number shall not be increased without the prior approval of the Department of Dermatology and the Vice Chancellor.
- (viii) Each candidate shall make an application for admission in response to advertisement, on a prescribed form along with documents specified in the admission form.

(ix) In case a candidate who is in Government service is selected by the committee for the admission he shall obtain the deputation from his department

(x) All the candidates shall have to undertake a bond at the time of registration.

(xi) Any student, who was rusticated, expelled or whose entry in the University Campus was banned for any reason whatsoever, shall not be re-admitted.

Regulations for Registration

At the beginning of each session a CAM student shall have to register for the courses of study in the prescribed manner, within 30 days of the commencement of the academic session.

Regulations for Examinations

- (i) Each module will be assessed by one assignments, two after each contact session. The assignment will have to be handed in within 30 days. If the assignment is graded unsatisfactory, it can be resubmitted only once.
- (ii) A student shall be allowed to appear in the final examination, provided that he/she has attended 90% of the contact sessions and successfully completed all the assignments of the required modules.
- (iii) The candidates securing 90% marks or above shall be deemed to have passed with distinction, provided he/she has passed the examination in first attempt.
- (iv) A student who fails even after availing 2 chances shall cease to be a student of the University and shall not be eligible for another attempt.
- (v) The candidate shall have to pass the examination in a maximum of 2 attempts to enable him/her to continue his/her studies.
- (vi) Candidates who fail in any aspect of the assessment will have one further opportunity to submit/take the assessment.
- (vii) The Pass Marks for Final Examination shall be 60%.

Program Structure

Module	Module Lead	Title of module	Contact Hours	Hands-on	Assignments	Duration in weeks	Credit Hours
CAM 1	Dr. Shawana Sharif/ Dr. Iram Ashraf	Introduction to Aesthetic Medicine	12 Hours (2 days)	6 hours	1	6 weeks	
CAM 2	Dr. Shawana Sharif/ Dr. Iram Ashraf	Non-invasive skin treatments	12 Hours (2 days)	6 hours	1	6 weeks	
CAM 3	Dr. Shawana Sharif/ Dr. Zainab Tariq	Facial anatomy and injectables	12 Hours (2 days)	6 hours	1	6 weeks	
CAM 4	Dr. Shawana Sharif/ Dr. Nausheen Randhawa	Advanced Aesthetic Procedures	12 Hours (2 days)	6 hours	1	6 weeks	
Total: 26 weeks							

Learning Outcomes

CAM 1: Introduction to Aesthetic Medicine

Topic	Contact Session	Learning Objectives
Historical Perspectives and current trends of Aesthetic Medicine	1	<ul style="list-style-type: none"> • Describe the historical development of aesthetic medicine and identify current trends shaping the field. • describe the aging process and its implications for aesthetic concerns • Evaluate current trends in aesthetic medicine, such as minimally invasive procedures, non- surgical treatments, and technological advancements. • Articulate the key concepts and principles of aesthetic medicine.
Ethical Considerations and patient-centered care	1	<ul style="list-style-type: none"> • Explain the ethical principles and apply them to patient- centred care in aesthetic medicine. •
Anatomy and Physiology for Aesthetic Medicine	1	<ul style="list-style-type: none"> • Demonstrate knowledge of skin, hair, and nail anatomy and physiology relevant to aesthetic medicine •
Understanding the aging process and its impact on aesthetic concerns	1	<ul style="list-style-type: none"> • Define the concept of aging and classify it into categories such as intrinsic and extrinsic aging • Identify validated scales of aging, such as the Fitzpatrick scale and the Glogau scale • Analyse the aging process, including factors like collagen loss, muscle atrophy, and hormonal changes, and its implications for aesthetic treatments • Recognize age-related aesthetic concerns, such as wrinkles, sagging skin, and volume loss, and discuss potential interventions, including injectables and laser treatments
Dermatology for Aesthetic Medicine	1	<ul style="list-style-type: none"> • identify and describe common dermatological conditions • Demonstrate an understanding of the causes, triggers, and risk factors associated with these dermatological conditions. • Discuss and evaluate various treatment modalities and options available for each dermatological condition. • Develop practical skills in conducting hands-on skin assessments, enabling them to assess and diagnose different skin types and conditions effectively. • Gain practical experience in the administration of dermatological treatments, including procedures such as cryotherapy • Empathy and sensitivity when dealing with patients who have dermatological conditions, creating a supportive and reassuring environment
Pharmacology in Aesthetic Medicine	1	<ul style="list-style-type: none"> • Understand the mechanisms of action for aesthetic pharmacological agents • Recognize indications and contraindications for the use of these agents based on patient characteristics and aesthetic goals. • Analyse potential side effects and adverse reactions associated with aesthetic pharmacological agents.
Techniques for assessing patient's aesthetic needs and expectations	1	<ul style="list-style-type: none"> • Demonstrate a deep understanding of techniques for assessing patient needs and expectations, including gathering relevant medical history, assessing aesthetic goals and understanding patient motivations. •
Developing treatment plans based on individual characteristics	1	<ul style="list-style-type: none"> • Analyse the patient's individual characteristics, including facial anatomy, skin type, and existing conditions. • Evaluate the feasibility and appropriateness of various aesthetic procedures based on the patient's goals and physical attributes. • Foster a patient-centred approach, respecting the autonomy of the individual

and goals		in making decisions about their own appearance
Effective communication and informed consent processes	1	<ul style="list-style-type: none"> • Cultivate empathy towards patients' aesthetic concerns and develop strong communication skills for effective patient interaction. • Demonstrate empathy during procedures to minimize patient discomfort and anxiety • Demonstrate the ability to obtain informed consent, ensuring the patient fully understands the procedures and their implications.

CAM 2: Non-invasive aesthetic treatments

Topic	Contact Session	Learning Objective
Chemical peels: Indications, Mechanism, Types	1	<ul style="list-style-type: none"> • Develop an in-depth understanding of chemical peels, including their mechanisms, indications, and evidence-based applications. • Differentiate between various types of chemical peels and understand their appropriate use based on evidence.
Chemical peels: Practical points	1	<ul style="list-style-type: none"> • Gain practical experience in performing chemical peel procedures, focusing on the selection of the appropriate peel type, application techniques, and patient comfort. • Discuss recent advancements in chemical peel formulations, delivery systems, and combination therapies.
Dermabrasion/ hydrafacial	1	<ul style="list-style-type: none"> • Develop an understanding of the Hydrafacial procedure, its mechanisms, and evidence-based indications • Develop skills for conducting Hydrafacial procedures, ensuring patient satisfaction and safety.
Overview of laser and energy-based devices used in aesthetic medicine	1	<ul style="list-style-type: none"> • Gain an overview of laser and energy-based devices, including their mechanisms of action, indications, and evidence-based treatment protocols
EBDs: Indications, treatment protocols, and safety measures	1	<ul style="list-style-type: none"> • Identify indications for various laser and energy-based treatments, focusing on conditions such as hair removal, skin rejuvenation, and the treatment of vascular lesions. • Demonstrate an understanding of safety measures and precautions associated with laser and energy-based procedures in aesthetic medicine.
Laser hair reduction	1	<ul style="list-style-type: none"> • Develop comprehensive treatment protocols, emphasizing factors like device selection, energy settings, treatment intervals, and the number of sessions needed for effective results of laser hair reduction
Skin rejuvenation using EBDs	1	<ul style="list-style-type: none"> • Provide hands-on training in using laser and energy-based devices for skin rejuvenation, offering practical experience in performing treatments. • Allow students to practice techniques for skin rejuvenation
Understanding body sculpting techniques without surgery	1	<p>Develop knowledge about body sculpting techniques without surgery, encompassing modalities such as cryolipolysis, radiofrequency, ultrasound, and others, along with their indications and evidence-based applications.</p>
Cryolipolysis, radiofrequency, ultrasound, and other modalities	1	<ul style="list-style-type: none"> • Develop comprehensive treatment protocols, emphasizing factors like device selection, energy settings, treatment intervals, and the number of sessions needed for effective results. • Emphasize safety measures, including eye protection, skin cooling, pre-treatment skin preparation, and potential contraindications based on patient characteristics and medical history.

Patient assessment, treatment planning, and post-treatment care while using EBDs	1	<ul style="list-style-type: none">• practice patient assessment and treatment planning for laser and energybased procedures, developing individualized care plans based on evidence.• Participants should develop skills in post-treatment care and follow-up to optimize treatment outcomes and patient satisfaction.
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CAM 3: Facial anatomy and Injectables

Topic	Contact Session	Learning Objective
Detailed study of facial anatomy for precise treatment planning	1	<ul style="list-style-type: none"> • Get a detailed knowledge of facial anatomy, including muscle groups, vascular structures, and key facial landmarks. • Provide an in-depth exploration of facial anatomy, covering facial muscles, nerves, arteries, veins, and lymphatics. • Explain the relevance of facial anatomy to aesthetic medicine, emphasizing how knowledge of facial structures is essential for safe and effective treatments. • Engage students in discussions about facial asymmetry, proportions, and the impact of aging on facial anatomy.
Basics of botulinum toxin and dermal fillers	1	<ul style="list-style-type: none"> • Demonstrate an understanding of the basics of dermal fillers and botulinum toxin, including their mechanisms of action, indications, and contraindications. • Gain hands-on experience to develop proficiency in injection techniques for various facial regions. • Practice safe and aseptic injection procedures, ensuring patient comfort and minimizing risks of complications.
Patient-specific treatment plans and the selection of appropriate injection materials	1	<ul style="list-style-type: none"> • Develop an aesthetic appreciation for facial beauty by discussing cultural and individual variations in facial aesthetics. • Promote respect for facial anatomy as a foundation for enhancing natural beauty rather than altering it dramatically. •
Botulinum Toxin: Injection techniques, dosage calculations, and safety considerations	1	<ul style="list-style-type: none"> • Explore botulinum toxin, its mechanism of action, common uses (e.g., for dynamic wrinkles), and safety considerations. • Discuss the importance of dilution, reconstitution, and storage of injectables.
Toxin: Managing complications and adverse events	1	<ul style="list-style-type: none"> • Learn to recognize and respond to potential complications or emergencies during aesthetic procedures • Promote empathy when dealing with potential adverse events or complications, ensuring that patients feel supported throughout the process.
Fillers: Injection techniques, dosage calculations, and safety considerations	1	<ul style="list-style-type: none"> • Train students in advanced injection techniques for the mid and lower face, addressing specific concerns like nasolabial folds, marionette lines, and cheek volume restoration. • Practical hands-on training in advanced injection techniques for the mid and lower face • Teach students to calculate appropriate dosages based on individual patient needs and facial anatomy.
Different Injection Techniques for Various Facial Areas:	1	<ul style="list-style-type: none"> • Practice safe injection techniques, Danger zone consideration including aseptic procedures and proper disposal of materials. • Know a range of injection techniques for different facial areas.

		<ul style="list-style-type: none"> • Explain techniques for addressing horizontal lines and brow lift. • Know methods for adding volume and contour of temples. • Cheeks: Know approaches for enhancing cheekbone definition and mid-face rejuvenation. • Explore lip augmentation and rejuvenation techniques. • Nasolabial Folds and Marionette Lines: Discuss methods for softening these lines. • Emphasize the importance of patient-specific treatment plans and the selection of appropriate injection materials (e.g., hyaluronic acid fillers)
Fillers: Managing complications and adverse events	1	<ul style="list-style-type: none"> • Emphasize the importance of safety measures, including patient assessments, aseptic techniques, and knowledge of anatomy to avoid complications. • Stress the importance of prompt and effective responses, including the use of hyaluronidase for dermal filler-related issues.

CAM 4: Advanced Aesthetic Procedures

Topic	Contact Session	Learning Objective
Thread lift: facial anatomy and aesthetic assessment	1	<ul style="list-style-type: none"> • Get a detailed knowledge of facial anatomy, including muscle groups, vascular structures, and key facial landmarks. • Provide an in-depth exploration of facial anatomy, covering facial muscles, nerves, arteries, veins, and lymphatics. • Explain the relevance of facial anatomy to aesthetic medicine, emphasizing how knowledge of facial structures is essential for safe and effective treatments. • Engage students in discussions about facial asymmetry, proportions, and the impact of aging on facial anatomy, with regard to threads
Thread lift: mechanism, indications and techniques	1	<ul style="list-style-type: none"> • Know types and indications of threads • Get a clear idea of mechanism of action • Demonstrate the concept of vector in lifting threads • Perform basic threads for common anti aging indications.
Concept of regenerative medicine	1	<ul style="list-style-type: none"> • Gain knowledge about regenerative medicine in the context of aesthetic treatments and its evidence-based applications. • Get overview of regenerative medicine and its applications in aesthetic procedures, including stem cells, growth factors, and tissue engineering.
Mesotherapy	1	<ul style="list-style-type: none"> • Develop practical skills in performing mesotherapy for aesthetic enhancement, ensuring precision, patient comfort, and safety. • Gain hands-on experience in utilizing it through practical workshops and simulations. • Practice critical appraisal skills to evaluate and select new interventions based on evidence and patient suitability.
Platelet rich plasma therapy	1	<ul style="list-style-type: none"> • Develop practical skills in performing PRP for aesthetic enhancement, ensuring precision, patient comfort, and safety. • Gain hands-on experience in utilizing it through practical workshops and simulations. • Practice critical appraisal skills to evaluate and select new interventions based on evidence and patient suitability
Microneedling	2	<ul style="list-style-type: none"> • Develop practical skills in performing microneedling for aesthetic enhancement, ensuring precision, patient comfort, and safety. • Gain hands-on experience in utilizing it through practical workshops and simulations. • Practice critical appraisal skills to evaluate and select new interventions based on evidence and patient suitability
Emerging therapies (skin boosters, exosomes etc.)	2	<ul style="list-style-type: none"> • Explain and apply emerging techniques in aesthetic medicine. • Demonstrate the ability to critically appraise new interventions and assess their evidence base.

Combination treatments		<ul style="list-style-type: none"> • Explore the concept of combination therapies to achieve enhanced aesthetic results by synergizing different treatment modalities. • Discuss evidence-based approaches to combining treatments, taking into account patient suitability and expected outcomes. • Analyse the scientific rationale and clinical studies supporting the effectiveness of various combination strategies.
Hair transplant	2	<ul style="list-style-type: none"> • Get an overview of hair transplant • Discuss different types of hair transplant • Know its indications and process of doing hair transplant • Know different complications of hair transplant
Fat transfer	2	<ul style="list-style-type: none"> • Get an overview of fat transfer • Discuss different types of fat transfer • Know its indications and process of doing fat transfer • Know different complications.

Provisional Schedule

1st Contact Session Assignments and online teaching 2nd Contact Session Assignments and online teaching Exit Exam

28-10-2024 to 02-10-2024 6 Days	3months	27-01-2025 to 01-02-2025 6days	3months	26-4-2025 1 Day
<p>CAM 1 Introduction to Aesthetic Medicine</p> <p>CAM 2 Non-invasive skin treatments</p>		<p>CAM 3 Facial anatomy and Injectables</p> <p>CAM 4 Advanced Aesthetic Procedures</p>		<p>Written (CAM 1-4) OSCE</p>

Mode of Study

Each contact session has 6 days of face-to-face contact comprising of 2 modules. The remainder of the time will be a mixture of self-study and online contact.

At the end of each contact session 2 assignments will be given to the candidates. Timeline for assignment completion will be as follows

4 weeks for submission of First Draft

4 weeks for checking assignments.

4 weeks for submission of Final Draft (if first draft is unsatisfactory)

Proposed Time Tables

Contact Session -1

DATE	08:00AM -- 09:30AM	09:30AM -- 11:00AM	11:00A M -- 11:30A M	11:30AM -- 12:30PM	12:30PM -- 02:00PM
Day 1: 28-10-24 CAM 1	History of Aesthetic Medicine and current trends Facilitator: Dr. Shyna Shahid	Cosmeceuticals, Ethical considerations and Patient centered care Facilitator: Dr. Shyna Shahid	Tea Break	Anatomy and Physiology for Aesthetic Medicine Facilitator: Lt. Col. Dr. Sakina Sadiq	Understanding the Aging process and its impact on aesthetic concerns Facilitator: Lt. Col. Dr. Sakina Sadiq
Day 2: 29-10-24 CAM 1	Techniques for assessing patient's aesthetic concerns Facilitator: Dr. Sadia Cheema	Developing treatment plans based on individual characteristics and goals. Effective communication and informed contact processes Facilitator: Dr. Sadia Cheema	Tea Break	Dermatology for Aesthetic Medicine Facilitator: Dr. Shawana Sharif	Histopathology for Aesthetic Medicine Facilitator: Dr. Mudassira
Day 3: 30-10-24 CAM 2	Overview of lasers and energy based devices used in Aesthetic Medicine(including radiofrequency, HIFU, cryolipolysis) Facilitator: Dr. Sumaira Abdullah	Laser hair reduction, Lasers for vascular lesions Facilitator: Dr. Sumaira Abdullah	Tea Break	Energy based devices for acne scars, Energy based devices for skin rejuvenation Facilitator: Dr. Riffat Yasmeen	Energy based devices for skin pigmentation Facilitator: Dr. Riffat Yasmeen
Day 4: 31-10-24 CAM 2	Chemical peels, indications, mechanisms, types Facilitator: Dr. Shafia Mudassar	Chemical peels, practical points Facilitator: Dr. Shafia Mudassar	Tea break	Chemical peels: Hands on Facilitator: Dr. Shafia Mudassar	Dermabrasion, hydrfacial Facilitator: Dr. Shafia Mudassar
Day 5: 1-11-24 Hands on	Practical demonstration and Hands on of module 1 and 2 Facilitator: Dr. Abdul Quddus Butt and team Venue: Skin laser Complex, 6th road, Rawalpindi				
Day 6: 2-11-24 Hands on	Practical demonstration and Hands on of module 1 and 2 Facilitator: Dr. Shawana Sharif and team Venue: Estheticare, F-7/2, Islamabad				
Online teaching and Assignments					
3 months Facilitator: Dr. Iram Ashraf (Germany)					

Contact Session -2

Under process

Assessment

Formative

1 MCQ test per contact session (10 MCQs per module- Total 20 MCQs per test)

1 Assignment per module- 20 Marks (Total 4 Assignments- 80 Marks)

Summative:

A final examination will be held at the end of the Program.

It will comprise of 80 MCQs (20 per Module- Total 80 Marks) Formative

Recommended Learning Resources

1. Textbook of Cosmetic Dermatology
2. Illustrated guide to aesthetic botulinum toxin injections
3. Illustrated guide to injectable fillers
4. Injectable fillers in Aesthetic medicine
5. Microneedling
6. Chemical peels, microdermabrasion, and topical products
7. Atlas of mesotherapy in skin rejuvenation
8. Lasers in Dermatology, parameters and choice
9. Soft tissue fillers
10. Toxins
11. Non-surgical rejuvenation of Asian faces
12. Non-surgical thread procedures
13. PRF in surgical Aesthetics
14. Radiofrequency in cosmetic dermatology
15. Dermatological surgery with radiofrequency

16. Techniques in the evaluation and management of hair diseases

Peer reviewed journals