UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Principles of Wound and Burns Management

2627-4-H4101D405

Aims

The course aims to provide students with fundamental theoretical and practical knowledge for the management of wounds and burns.
Particular emphasis will be given to the pathophysiology of tissue repair, the classification of injuries, principles of surgical and local wound management, and prevention of infectious and cicatricial complications.

Contents

The course addresses the fundamental principles of the pathophysiology of tissue repair and wound healing, analyzing the cellular mechanisms that regulate the different phases of the healing process.
A classification of the main types of traumatic wounds — contused, lacerated, incised, stab, and gunshot wounds — will be presented, with an in-depth discussion of clinical evaluation criteria and local treatment approaches.
The principles of cleansing, debridement, and antisepsis will be illustrated, together with suturing techniques and the selection of appropriate materials according to the type of lesion. Particular attention will be devoted to the prevention and management of local complications such as infection, dehiscence, necrosis, and pathological scarring.
A section of the course will focus on burn management, including classification by cause, depth, and extent (according to the “rule of nines”), clinical assessment, and principles of initial treatment. The main surgical strategies for burn management will also be discussed.
Finally, the course will explore the importance of psychological and rehabilitative approaches in the treatment pathway of patients with wounds or burns. Lectures will be complemented by real clinical case discussions and practical sessions with simulations of suturing and dressing techniques.

Detailed program

Pathophysiology of Skin Injury
Structure and function of the skin
Wound healing processes: inflammation, proliferation, and remodeling
Factors influencing wound healing
Classification of Wounds and Principles of Management
Surgical and traumatic wounds: types and clinical assessment
Hemostasis, debridement, wound closure, drainage, and advanced dressings
Antibiotic and tetanus prophylaxis
Burns: Assessment and Management
Classification of burns (types, causes, depth, extent, “rule of nines”)
Principles of local and systemic treatment
Clinical and Practical Aspects
Clinical cases: facial wounds
Practical demonstrations of suturing techniques and wound management procedures

Prerequisites

Basic knowledge of anatomy, physiology, microbiology, and principles of surgical asepsis.

Teaching form

Lectures (frontal teaching)
Clinical case discussions
Educational videos

Textbook and teaching resource

Grabb & Smith’s Plastic Surgery, cap. su “Wound Healing and Burns”
WHO – Burn Management Manual (2021)
Textbook of Plastic, Reconstructive, and Aesthetic Surgery, Vol 5 Burns
Textbook of Plastic, Reconstructive and Aesthetic Surgery, Vol 1 Principles and Advances in Plastic Surgery

Semester

May 6, 2026 – 2:00 PM to 5:30 PM

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Assessment method

(G) Final Assessment

Office hours

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Sustainable Development Goals

GOOD HEALTH AND WELL-BEING