

Burn, Wound Healing & Tissue Repair Nutrition Specialization Course

6 Month Advanced Specialization Course

COURSE POSITIONING

Designed for nutrition and dietetics students, graduates and practicing dietitians who want advanced competence in nutrition care for burns, pressure injuries, diabetic foot ulcers, surgical wounds, traumatic wounds, vascular wounds, chronic nonhealing wounds, critical illness and rehabilitation. The course develops clinical reasoning from skin and tissue physiology through nutrition support, wound specific assessment, burn hypermetabolism, advanced case management and multidisciplinary practice.

The Course Moves Participants Away From

Common Oversimplification

Advanced Clinical Direction

A wound means increase protein and vitamin C

Identify wound type, healing barriers, nutritional status and the actual nutrition problem before prescribing

Every burn needs the same high protein diet

Individualize energy and protein according to burn severity, clinical condition and stage of recovery

Pressure injury means a wound supplement

Assess malnutrition, pressure, mobility, hydration, comorbidities and total intake first

Diabetic foot healing is only about glucose

Integrate glycemic control with perfusion, infection, offloading and

nutritional adequacy

More supplementation means faster healing

Use supplements only when evidence, indication, dose, safety and monitoring justify them

Core Learning Pathway

Understand Skin & Tissue Physiology → Understand Wound Healing → Conduct Specialized Nutrition Assessment → Understand Burn Severity → Manage Hypermetabolism & Catabolism → Calculate Burn Requirements → Provide Early Nutrition Support → Manage Pressure Injuries & Diabetic Foot → Understand Vascular & Surgical Wounds → Evaluate Protein, Micronutrients & Specialized Supplements → Manage Critical Illness & Refeeding Risk → Support Rehabilitation → Apply NCP → Defend Complex Burn & Wound Cases

Course Roadmap

Month

Primary Development Area

Participant Development

Month 1

Skin Physiology, Wound Healing & Specialized Nutrition Assessment

Understand tissue repair, wound categories, healing barriers and comprehensive nutrition assessment

Month 2

Burn Injury, Hypermetabolism & Acute Burn Nutrition

Develop advanced competence in major burn metabolism, energy and protein requirements, early feeding and nutrition support

Month 3

Pressure Injuries, Diabetic Foot & Chronic Wounds

Apply nutrition reasoning to pressure injuries, diabetic foot ulcers and difficult to heal wounds

Month 4

Surgical, Traumatic, Vascular & Complex Wound Nutrition

Understand perioperative, trauma, venous, arterial and complex wound nutrition

Month 5

Micronutrients, Specialized Nutrition, Infection & Critical Care

Evaluate supplements, micronutrients, sepsis, refeeding risk and advanced nutrition support

Month 6

Rehabilitation, Advanced Practice, ADIME & Complex Case Management

Integrate diagnosis, intervention, monitoring, documentation, rehabilitation and multidisciplinary case reasoning

Specialization Philosophy

Nutrition is one component of tissue repair. The dietitian must identify whether inadequate intake, malnutrition, catabolism or nutrient deficiency is limiting healing while recognizing that pressure, ischemia, infection, poor glycemic control and surgical issues require their own professional management.

MONTH 1 | Skin Physiology, Wound Healing & Specialized Nutrition Assessment

Before prescribing protein for a wound, understand how tissue actually heals.

Week

Focus

Learning Content

Practical Application

Week 1

Skin Anatomy & Physiology for Dietitians

Epidermis, dermis and subcutaneous tissue. Barrier function. Blood supply and tissue oxygenation. Collagen and connective tissue. Immune function and inflammatory response.

Connect tissue anatomy and physiology with the nutritional consequences of burns, pressure damage and chronic wounds.

Week 2

Phases of Wound Healing

Hemostasis, inflammation, proliferation, granulation tissue, collagen synthesis, angiogenesis, epithelialization and remodeling. Effects of malnutrition, poor perfusion, hyperglycemia, infection, pressure, smoking, steroid therapy, frailty and repeated trauma.

Review a delayed healing case and distinguish nutritional from nonnutritional barriers.

Week 3

Understanding Wound Types

Pressure injury, diabetic foot ulcer, venous wound, arterial wound, surgical wound, traumatic wound, burn wound, radiation related injury and chronic nonhealing wounds. Understand mechanisms without independently diagnosing or staging wounds.

Compare common wound types and identify how the mechanism changes nutrition priorities.

Week 4

Comprehensive Wound Nutrition Assessment

Medical diagnosis, wound type and duration, wound information supplied by the clinical team, infection, perfusion, diabetes, renal function, inflammation, weight and muscle history, dietary intake, protein, hydration, GI function, medications, supplements, mobility and social support.

Complete a specialized wound nutrition assessment.

Month 1 Development Outcome

Move from a generic healing diet toward identifying the wound mechanism, the patient's nutritional status and the nutrition problem that can actually be treated.

MONTH 2 | Burn Injury, Hypermetabolism & Acute Burn Nutrition

A major burn is a whole body metabolic injury, not only damage to the skin.

Week

Focus

Learning Content

Practical Application

Week 5

Burn Classification & Clinical Context

Burn depth, total body surface area concepts, thermal burns, scalds, chemical burns, electrical burns, inhalation injury, minor versus major burns and burn center care. Use burn severity information supplied by trained burn clinicians.

Compare minor and major burns and identify how clinical severity changes nutrition care.

Week 6

Burn Hypermetabolism & Catabolism

Stress response, catecholamines, inflammation, increased energy expenditure, protein breakdown, negative nitrogen balance concepts, muscle wasting, insulin resistance, glucose abnormalities and immobilization related muscle loss.

Explain why a major ICU burn creates very different nutrition demands from a small localized burn.

Week 7

Energy, Protein & Nutrient Requirements in Burns

Individualized energy assessment, indirect calorimetry concepts, protein provision, carbohydrate and fat contribution, fluid within the wider burn resuscitation context, micronutrient losses and avoidance of underfeeding and overfeeding.

Develop and defend a complete nutrition prescription for a simulated major burn case.

Week 8

Early Enteral Nutrition in Major Burns

Early feeding concepts, gastric and postpyloric routes, continuous feeding, energy dense and high protein options, supplemental protein, water provision, interruptions for procedures, glycemic monitoring, tolerance and transition toward oral intake.

Develop an enteral feeding plan for a mechanically ventilated burn

patient and revise it during recovery.

Month 2 Development Outcome

Understand how burn severity, hypermetabolism, clinical stability and recovery stage shape the nutrition prescription.

MONTH 3 | Pressure Injuries, Diabetic Foot & Chronic Wounds

Protein cannot overcome untreated pressure, ischemia or infection.

Week

Focus

Learning Content

Practical Application

Week 9

Pressure Injury Nutrition

Pressure injury terminology, nutrition screening, malnutrition assessment, reduced intake, weight loss, muscle depletion, energy and protein needs, hydration, oral nutrition supplements, micronutrients and pressure redistribution as nonnutrition care.

Develop nutrition intervention for an older adult with a pressure injury and poor oral intake.

Week 10

Advanced Pressure Injury Cases

Poor intake, malnutrition, obesity with low muscle reserve, CKD, diabetes, dysphagia, fluid restriction, exudative wounds and competing nutrition requirements.

Manage a pressure injury case with CKD, diabetes and malnutrition simultaneously.

Week 11

Diabetic Foot Ulcer Nutrition

Diabetes and wound healing, hyperglycemia, nutritional adequacy, protein, micronutrient deficiency, vascular disease, neuropathy, infection, offloading as clinical context and renal disease overlap.

Compare a diabetic foot ulcer patient with good nutrition status and another with severe malnutrition.

Week 12

Chronic Nonhealing Wounds

Investigate inadequate intake, malnutrition, impaired perfusion, infection, continued pressure, hyperglycemia, edema, smoking, medication effects and actual adherence to the prescribed nutrition plan.

Build a structured differential assessment for a chronic wound that is failing to heal.

Month 3 Development Outcome

Move from automatic wound supplements toward identifying the true barriers to healing and the nutrition problem that is modifiable.

MONTH 4 | Surgical, Traumatic, Vascular & Complex Wound Nutrition

Different wound mechanisms require different clinical priorities.

Week

Focus

Learning Content

Practical Application

Week 13

Surgical Wound Healing

Preoperative malnutrition, prehabilitation concepts, surgical stress, energy and protein, postoperative feeding, healing, infection, delayed recovery and nutrition support escalation.

Follow a patient from preoperative malnutrition through surgery and recovery.

Week 14

Traumatic & Complex Wounds

Major trauma, open wounds, soft tissue injury, multiple fractures, repeated surgery, negative pressure wound therapy as clinical context, large tissue loss, infection, prolonged hospitalization, muscle loss and rehabilitation.

Develop nutrition care for a polytrauma patient with open wounds and repeated procedures.

Week 15

Venous Leg Ulcers & Edema Related Wounds

Venous insufficiency as medical context, edema, mobility, obesity, malnutrition risk, protein adequacy, compression as nonnutrition treatment and cardiac or renal overlap.

Develop supportive nutrition care without confusing edema management with automatic fluid restriction.

Week 16

Arterial Wounds & Ischemic Healing

Peripheral arterial disease, reduced perfusion, cardiovascular risk, smoking, diabetes, atherosclerosis, nutritional adequacy, protein and micronutrients. Understand why nutrition cannot compensate for inadequate blood supply.

Identify when nutrition is supportive but vascular treatment remains the dominant requirement.

Month 4 Development Outcome

Recognize that wound nutrition must be matched to the mechanism, perfusion and overall clinical context.

MONTH 5 | Micronutrients, Specialized Nutrition, Infection & Critical Care

More supplementation does not automatically mean faster healing.

Week

Focus

Learning Content

Practical Application

Week 17

Protein, Amino Acids & Specialized Wound Supplements

Total protein intake, protein distribution, arginine, glutamine in selected contexts, HMB, specialized oral nutrition supplements, collagen products, protein powders and commercial wound formulas. Evaluate indication, evidence, renal and hepatic suitability and monitoring.

Critically appraise a specialized wound supplement before recommending it.

Week 18

Micronutrients in Burns & Wound Healing

Vitamin C, vitamin A, vitamin D, zinc, copper, selenium, iron, B vitamins and antioxidant systems. Correct deficiency or clinically justified increased need without routine megadosing.

Review a high dose micronutrient regimen and identify which components are justified and which require reassessment.

Week 19

Infection, Sepsis & Wound Related Critical Illness

Local versus systemic infection as medical context, inflammation, sepsis, catabolism, reduced intake, critical care nutrition, glycemic management, protein, enteral nutrition, fluid balance, organ dysfunction and daily reassessment.

Build nutrition priorities for a critically ill wound patient with sepsis.

Week 20

Refeeding Risk & Advanced Nutrition Support

Assess refeeding risk in severe malnutrition, burns, chronic wounds, alcohol related malnutrition, older adults and prolonged poor intake. Integrate phosphate, potassium, magnesium, thiamine, glucose, fluid and controlled nutrition advancement.

Develop a cautious feeding progression for a severely malnourished wound patient.

Month 5 Development Outcome

Use evidence, indication and monitoring rather than routine supplementation or aggressive feeding.

MONTH 6 | Rehabilitation, Advanced Practice, ADIME & Complex Case Management

Healing does not finish when the wound closes.

Week

Focus

Learning Content

Practical Application

Week 21

Burn Rehabilitation & Long Term Recovery

Muscle rebuilding, reassessment of energy and protein, physical rehabilitation, weight restoration where appropriate, reduction of excessive feeding as hypermetabolism resolves, body image, psychosocial recovery and return to normal eating.

Transition a patient from acute high requirement burn nutrition to rehabilitation and community nutrition.

Week 22

Burn & Wound Nutrition Diagnosis

Nutrition diagnoses related to increased nutrient needs where appropriately documented, inadequate energy or protein intake, malnutrition, unintended weight loss, altered GI function, swallowing related inadequate intake, excessive or inadequate nutrient intake and food related knowledge problems.

Write and defend PES statements without using the wound or burn diagnosis itself as the nutrition diagnosis.

Week 23

Monitoring, ADIME & Multidisciplinary Practice

Burn and wound ADIME documentation. Monitoring intake, weight, muscle, functional recovery and healing trends. Collaboration with burn surgery, plastic surgery, wound care, critical care, diabetes, vascular, podiatry, pharmacy, rehabilitation and swallowing professionals.

Prepare a specialized ADIME note and multidisciplinary referral communication.

Week 24

Advanced Burn & Wound Case Defense

Integrate wound or burn type, clinical severity, TBSA information where relevant, healing progression, infection, perfusion, pressure, diabetes, renal function, weight, muscle, energy, protein, hydration, micronutrients, nutrition support route, refeeding risk, medications, function and monitoring.

Defend one major burn case, one pressure injury case, one diabetic foot or chronic wound case and one surgical or complex wound case.

Month 6 Development Outcome

Be able to explain what is limiting healing, whether the limitation is nutritional, what intervention is justified and how success will be monitored.

Dedicated Burn Nutrition Competency Portfolio

Competency

Expected Skill

Burn Assessment Context

Understand burn depth and TBSA information supplied by the burn team

Hypermetabolism

Explain the metabolic consequences of major burns

Energy

Estimate needs and understand indirect calorimetry concepts

Protein

Individualize elevated requirements according to severity and clinical status

Enteral Nutrition

Develop an early feeding strategy and monitor delivery

Micronutrients

Assess burn related losses and supplementation appropriately

Glycemia

Understand metabolic stress and glucose monitoring

Surgery

Adapt nutrition around grafting and repeated procedures

Rehabilitation

Reassess requirements as hypermetabolism resolves

Case Defense

Defend a complete major burn nutrition pathway

Dedicated Wound Healing Competency Portfolio

Competency

Expected Skill

Wound Type

Understand the clinical mechanism of common wounds

Nutrition Screening

Identify malnutrition risk

Protein

Assess adequacy and prescribe appropriately

Energy

Support healing without indiscriminate overfeeding

Hydration

Assess fluid needs within comorbid conditions

Micronutrients

Correct deficiencies without routine megadosing

Pressure Injury

Integrate nutrition within complete pressure management

Diabetic Foot

Integrate nutrition, glucose management and vascular context

Vascular Wounds

Recognize perfusion as a major determinant of healing

Monitoring

Connect nutritional status with healing progression over time

Burn & Wound Case Portfolio

Case Area

Practical Competency

Minor Burn

Determine when ordinary nutrition is sufficient

Major Burn

Develop a high acuity nutrition strategy

Mechanically Ventilated Burn Patient

Complete enteral feeding and monitoring

Burn With Severe Malnutrition

Integrate refeeding risk

Burn With AKI

Balance burn and renal requirements

Burn With Sepsis

Adapt nutrition during critical illness

Skin Graft Patient

Support healing and perioperative recovery

Post Burn Rehabilitation

Adjust nutrition as metabolic demand changes

Pressure Injury

Complete wound specific nutrition assessment

Pressure Injury With Malnutrition

Develop nutritional restoration plan

Pressure Injury With CKD

Balance competing nutrition requirements

Diabetic Foot Ulcer

Integrate diabetes and wound nutrition

Diabetic Foot With PAD

Recognize vascular barriers to healing

Venous Leg Ulcer

Integrate nutrition with edema and mobility considerations

Arterial Wound

Support nutrition while recognizing perfusion limitations

Surgical Wound

Develop perioperative recovery nutrition

Traumatic Wound

Support high requirement tissue repair

Chronic Nonhealing Wound

Investigate multiple barriers to healing

Refeeding Risk

Initiate nutrition safely

Complex Multimorbidity

Prioritize nutrition among multiple diseases

Final Case Defense

Defend complete burn and wound nutrition care

Professional Scope Integration

Situation

Dietitian's Role

Burn Depth

Use the medical burn assessment rather than independently classifying the injury

TBSA

Understand nutritional relevance while burn assessment remains specialist led

Burn Hypermetabolism

Assess and treat resulting nutrition problems

Wound Staging

Work from appropriately documented wound classification

Pressure Injury

Treat malnutrition and nutrition contributors while pressure redistribution and wound treatment remain multidisciplinary

Diabetic Foot Ulcer

Provide MNT while infection, vascular assessment, offloading and debridement remain with appropriate clinicians

Arterial Wound

Support nutritional status while vascular perfusion requires medical or surgical management

Venous Ulcer

Support nutrition while compression and vascular management remain within relevant professional scope

Wound Infection

Support nutrition while infection diagnosis and antimicrobial treatment remain medical

Debridement

Not a dietetic procedure

Skin Grafting

Support perioperative nutrition while surgery remains surgical

Micronutrients

Assess indication and nutritional need rather than automatically prescribing megadoses

Enteral Nutrition

Calculate and monitor feeding according to competence and institutional protocols

Refeeding Risk

Identify nutritional risk and support safe feeding within multidisciplinary management

Complex Burn

Work within specialized burn center and critical care teams

Complex Wound

Collaborate with wound care, surgery, diabetes, vascular, nursing and rehabilitation teams

Final Specialization Portfolio

Portfolio Component

Final Output

Burn & Wound Nutrition Assessment

Complete specialized clinical assessment

Wound Healing Physiology Map

Tissue repair and nutrition framework

Burn Nutrition Case

Full acute burn nutrition process

Burn Requirement Exercise

Energy, protein and fluid reasoning

Enteral Burn Feeding Case

Formula, rate, protein and monitoring plan

Burn Rehabilitation Case

Acute care to rehabilitation transition

Pressure Injury Case

Complete nutrition intervention

Pressure Injury Screening Tool

Malnutrition and intake assessment

Diabetic Foot Case

Diabetes plus wound nutrition framework

Vascular Wound Case

Perfusion aware nutrition management

Surgical Wound Case

Perioperative nutrition pathway

Micronutrient Appraisal

Critical evaluation of wound supplements

Refeeding Case

Safe initiation and monitoring framework

Wound ONS Comparison

Evidence based specialized supplement assessment

Complex Wound Case

Multimorbidity and delayed healing analysis

Burn and Wound ADIME Portfolio

Complete professional documentation

Multidisciplinary Referral Framework

Burn, wound, vascular, diabetes, surgery and rehabilitation pathways

Final Case Defense

Advanced burn and wound nutrition presentation

Expected Specialization Transformation

At Entry

At Completion

Burn patients need a high protein diet

I understand burn severity, hypermetabolism, nutritional status and nutrition support before prescribing protein

More calories always improve burn healing

I balance adequate provision against overfeeding and reassess requirements throughout recovery

Every wound needs vitamin C and zinc

I evaluate total intake, deficiency risk, indication and safety before supplementation

Pressure injury means high protein supplement

I assess malnutrition, pressure, mobility, hydration and the complete clinical context

A diabetic ulcer heals when sugar is controlled

I integrate glycemic health with nutritional adequacy, perfusion, infection and offloading

An obese wound patient cannot be malnourished

I assess weight trajectory, muscle, intake and clinical condition rather than body size alone

An arterial wound needs wound healing nutrition

I understand that nutrition cannot replace adequate tissue perfusion

Low albumin proves protein deficiency

I interpret nutrition status through comprehensive assessment rather than one laboratory result

A wound supplement speeds healing

I evaluate evidence, indication and the patient's complete intake before recommending specialized products

Burn nutrition ends when the wound closes

I continue reassessment through muscle recovery, rehabilitation and return to normal nutrition

Burn and wound dietetics means healing foods

I can conduct, document and defend a complete burn and wound medical nutrition therapy process

Final Learning Pathway

Learning Step

Learning Step

Understand Skin & Tissue Physiology

Understand Wound Healing

Conduct Specialized Nutrition Assessment

Identify Malnutrition

Understand Burn Severity

Understand Burn Hypermetabolism

Calculate Burn Nutrition Requirements

Provide Early Enteral Nutrition

Monitor Burn Nutrition

Support Grafting & Surgery

Manage Pressure Injury Nutrition

Manage Diabetic Foot Nutrition

Understand Venous & Arterial Wounds

Manage Chronic Wound Nutrition
Evaluate Protein & Specialized Supplements
Evaluate Micronutrients
Manage Critical Illness & Infection
Recognize Refeeding Risk
Support Burn & Wound Rehabilitation
Develop Nutrition Diagnosis
Provide Individualized Intervention
Monitor Healing & Nutritional Outcomes
Document & Collaborate
Defend Advanced Burn & Wound Cases

In One Line

This specialization develops dietitians who can provide structured and evidence informed medical nutrition therapy across major burns, hypermetabolism, skin grafting, pressure injuries, diabetic foot ulcers, surgical wounds, vascular wounds, chronic wounds and critical illness while appropriately integrating nutrition support, protein and micronutrient management, refeeding risk and rehabilitation within multidisciplinary burn and wound care.