Unit Specification

iUBT537 – Provide skin rejuvenation treatments using LASER systems

J/652/3186

Level: 4
Guided Learning Hours (GLH): 30

Overview

The aim of this unit is to develop learners' underpinning knowledge, understanding and practical skills when performing professional skin rejuvenation treatments using Light Amplification by the Stimulated Emissions of Radiation (LASER). The unit covers the skills involved in providing a thorough consultation to establish client suitability for treatment and also the knowledge of how to devise a specific treatment plan tailored to suit individual client's needs. Learners will also learn how to recognise different skin classifications and types as well as developing an understanding of laser and wavelengths used for the treatment of skin imperfections such as improving the effects of intrinsic and extrinsic ageing and minor acne skin conditions or sun-induced dyschromia. Additionally, they will be able to provide the client with relevant pre and post-care advice to maximise treatment results.

Learning outcomes

On completion of this unit, learners will:

LO1 Interpret the environmental and safety considerations when providing skin rejuvenation treatments using laser systems

LO2 Comprehend protocols and guidelines when providing skin rejuvenation treatments using laser systems

LO3 Comprehend the relevant anatomy, physiology and pathologies for skin rejuvenation treatments using laser systems

LO4 Demonstrate how to consult, plan and prepare for skin rejuvenation treatments using laser systems

LO5 Demonstrate how to provide skin rejuvenation treatments using laser systems

Unit content

LO1 Interpret the environmental and safety considerations when providing skin rejuvenation treatments using laser systems

Promoting environmental and sustainable working practices
Taught content
• Environmental working practices, to be effective and energy efficient, heating and ventilation to meet the workplace (Health, Safety and Welfare) Regulations 1992 (or local regulation requirements to the country being delivered in) for client and employees • Sustainable working practices – products with ingredients from sustainable sources and using sustainable packaging, efficient storage and waste disposal, record product usage

Licensing regulations for aesthetic practitioners and premises
Taught content
• Local government licensing where applicable • Professional association licensing • Responsibilities under local authority licensing regulations for both practitioners and premises where applicable • Responsibilities of employers and employees • Roles and responsibilities of the Laser Protection Adviser (LPA), Laser Safety Officer (LSO), authorised users and assisting staff responsibilities of the self-employed • Responsibilities of suppliers, manufacturers and installers

Insurance guidelines

Taught content

- Insurance policy requirements to be met to ensure professional indemnity/insurance cover is appropriate to this treatment and valid for working at this level
- The importance of having current basic life-saving (or Basic Life Support – BLS) training and any impact to insurance if this is not held by the practitioner
- Legal responsibilities of the practitioner for checking current insurance guidelines for the delivery of skin rejuvenation treatments using laser
- Importance of undertaking the Core of Knowledge training to meet insurance guidelines
- Requirements for skin test patch and test shots prior to treatment
- Legislative requirements with regards to optical radiation treatments
- Requirements for reporting adverse incidents/accidents, for example: RIDDOR, in line with local legislation or local authority of the country therein
- Legislative and indemnity requirements of gaining informed client consent and signature before every treatment
- Legislative and insurance requirements for obtaining medical or informed consent where required
- Acquiring client consent to visual media records before and after every treatment
- Providing verbal and written post-care information and gaining signed acceptance of results and agreement to follow aftercare advice given
- Ensuring operator is working within scope of their practice and competence with regard to conditions to be treated

Safety of product and equipment sourcing

Taught content

- Ensure laser equipment, accessories and associated products meet the regulatory requirements of the country they are being utilised in and are purchased from a reliable and authentic supplier/manufacturer
- Ensure equipment and technology conforms to Electrical Equipment Safety Regulations 1994/2016 as applicable
- The need for warning labelling on laser equipment and the importance of understanding labelling
- All equipment must comply with current standards, for example, BS EN 60601-2-22:2013 for Laser Medical Device Regulation (EU 2017/745) including, but not limited to having equipment labelled in accordance with standards, identifying the wavelength or range of wavelengths, wavelength delivery, single/multiple pulsed shots, the maximum pulse duration, width, delays, repetition, fluence/energy/power and spot size, variations of the radiation emitted, cooling
- Understand how to gain verification of legality of products and equipment sourcing
- The safety and legal reasons for using equipment, accessories and products that are licensed and meet EU standards or the relevant legislation for the country therein and the outcome of using equipment, accessories and products which are not properly tested or contain banned substances
- Know the legal requirements and restrictions for sourcing, storing and using topical anaesthetic/numbing agents licenced in the UK/EU or relevant to the country therein
- The use of Manufacturer/Material Safety Data Sheet (MSDS) in relation to laser treatments

Suppliers' and manufacturers' instructions for safe use

Taught content

- Know and understand reasons for supplier and manufacturer equipment and product protocols for laser treatments and why this can vary
- Follow supplier/manufacturer and organisational protocols for equipment safety; only used for intended purpose, correct storage, moving, handling, maintenance advice/requirements, record keeping, risk assessments, checks/visual checks, cleaning, use and methods of application, skin sensitivity and test shot recommendations
- Correct storage, selection, handling, loading, preparation and sanitising of laser treatment head, ensure it is clean and inserted correctly and does not exhibit cracks or chips
- Appropriate preparation for area(s) to be treated and how this can vary in accordance with the treatment protocol and supplier's/manufacturer's guidance
- Types of products appropriate for use during laser treatment preparation and application, performance, post care and aftercare application, for example, cleanser, alcohol-free skin cleanser/wipes/skin antiseptic, ultrasound/conductive gel (where appropriate), cooling mask/agent, Sun protection factor (SPF)
- Follow supplier/manufacturers guidelines to select appropriate hand piece/applicator head/filters considering treatment area, condition(s) to be treated and desired outcome
- Methods of treatment application – working methodically and systematically, in a specified order, using the correct angle, pressure, settings, parameters and techniques, supporting/manipulating the skin and adapting treatment to ensure even coverage of the treatment area. Observation of desirable and undesirable clinical end points. Frequency of treatment, course of treatments, skin types/conditions/areas suitable and unsuitable for treatment

Working in line with organisational procedures

Taught content

- Adhere to all supplier/manufacturer and organisational protocols
- Adhere to responsible marketing guidelines
- The individual responsibilities of working within a multidiscipline team
- Responsibility of working within remit of qualification boundaries
- The role of clinical governance within the aesthetic industry
- The importance of Continuing Professional Development (CPD), training, education and career opportunities

Hygiene considerations
Taught content
• Set up and work within a hygienic field. The definition of sterilisation and sanitisation and their suitable application to equipment, accessories and surfaces • Use of appropriate Personal Protective Equipment (PPE) – ensure protective eyewear is sanitised for each client/practitioner • Single use items as appropriate such as disposable gloves (latex free), protective facemasks. Additional single use equipment – disposable razors, disposable hair protectors, applicators, cotton wool, couch roll, mapping area drawing equipment as required • Hygienic preparation and storage of multi-use items, such as clean laundered towels – white make-up pencil, sharpener • Consider actions to take if therapist is ill, maintaining high standards of cleanliness, regarding uniform/clothing, the therapist's general appearance, personal hygiene and skin health • Standard Infection Control Precautions (SICPs). General hygiene, such as washing of hands before and after treatment, alcohol-free sanitising hand gel • Disinfectant or sterilisation – use of heat or chemical methods, bactericides, fungicides, UV cabinet for storage • Replace lids on containers or use pump dispensers • Waste disposal – general and contaminated waste in accordance with local authority requirements, including distinguishing factors for different types of waste. For example: - Infectious clinical waste = orange or yellow - Non-infectious clinical/offensive waste = yellow and black stripes - General, non-hazardous household waste = black • Knowledge of infection prevention and control, bacteria, virus, fungi, parasites, prevention of cross-contamination and disease transmission procedures, levels of infection control - for example, standard and universal precautions, personal immunisation (Hepatitis B), and Methicillin-Resistant Staphylococcus Aureus (MRSA), Herpes Simplex

Contra-indications that would prevent or restrict treatment
Taught content
• Prevent (absolute contra-indications) – certain photosensitive medication and herbal remedies as described by the British Medical Laser Association for example Amiodarone, Minocycline, St John's Wort, diabetes – for lower leg treatment, directly over moles, birthmarks, permanent or semi-permanent make up, gold medications, history of or present use of melatonin, history of skin cancer – malignant melanoma, non-melanoma skin cancers – Basal Cell Carcinoma (BCC) and Squamous Cell Carcinoma (SCC) (once treated and removed medical referral is required), haemophilia, HIV, AIDS, Hepatitis B or C, inappropriate skin colour, keloid scarring, autoimmune diseases, lupus, lymphatic system disorders, metal pins and plates, oral and topical retinoids, oral and topical medication for Photo-Dynamic Therapy (PDT), current medication of oral and topical steroids, (or if medication is ceased, client must be clear of medication for at least 2-4 weeks before treatment), angina, pacemaker/defibrillator, uncontrolled vascular diseases, bleeding or clotting disorders, pigmentary disturbance, for example, vitiligo, pigmented naevi, poorly controlled diabetes, porphyria, pregnancy suntanned skin (within 28 days of exposure) • Restrict (relative contra-indications) – cuts, abrasions, active acne, allergies, artificial tan (10 days post application treatment can recommence), active tan/ recent UV exposure (28 days post exposure treatment can recommence), sunburn, areas of undiagnosed pain, Botulinum toxin, bruises, cardiovascular conditions (thrombosis, phlebitis, hypertension, hypotension, heart conditions), chemical peels, clients taking anti-coagulant medication, clients sensitive to light through a medical condition or the use of medication, (refer to the manufacturer's instructions, British Medical Laser Association guidance and seek medical advice where required, depending on the individual sensitivity), connective tissue disorders, for example scleroderma, contagious or infectious diseases, drugs which causes skin thinning, depression/anxiety, eczema, fever, herpes (simplex/zoster), high blood pressure, infectious or contagious diseases, injectable fillers (in the proposed treatment area), loss of skin sensitivity, skin diseases, poor mental and emotional state, breastfeeding, psoriasis, tattoos, under the influence of drugs or alcohol, undiagnosed swelling, urticaria, varicose veins

Contra-indications requiring medical referral and referral processes

Taught content

- Contra-indications to laser procedures requiring medical referral such as active acne, acute rheumatism, any condition already being treated by General Practitioner (GP)/dermatologist, asthma, arthritis, Bell's palsy, diabetes, inflamed/trapped/pinched nerve, medical oedema, nervous/psychotic conditions, osteoporosis, recent operations, epilepsy
- Actions to take in relation to specific contra-indications when referring clients
- Knowledge of organisation protocol for not naming specific suspected contra-indications when encouraging client to seek medical advice, encourage clients to seek medical advice without alarm or concern
- Skin cancer is an ever-prevalent issue. Areas of skin or moles that have uneven asymmetry, irregular, ragged or blurred borders, uneven patchy colour or an altered diameter than previously noted, need to be identified and the client encouraged to go to their GP as a precaution. Knowledge of organisation protocol for not naming or diagnosing specific suspected contra-indications when encouraging client to seek medical advice, acknowledging the need for medical training to be able to diagnose without causing undue alarm. Refer in a discrete and empathetic manner. Knowledge of the ABCDE guide – Asymmetry, Border, Colour, Diameter, Evolving size

When to consult with other aesthetic professionals

Taught content

- Recognise when additional information is needed from other professionals involved with the client and how this can be obtained in compliance with confidentiality and consent guidance and in line with current data protection legislation
- Demonstrate an understanding of when to and how to request additional advice from other clinicians treating the client when applicable, in line with current data protection legislation
- Alternative treatment options when laser is not appropriate or contra-indicated for example; prescription products, tyrosinase inhibitors, dermaplaning, microdermabrasion, skin peels, mesotherapy, IPL, micro-needling, HIFU, radiofrequency, ultrasound, electroporation, depending on the condition being treated

Treatment of minors

Taught content

- The age at which an individual is classed as a minor and how this may differ nationally and internationally
- Why treatment should only be provided for clients over the age of 18

Hazards and risks
Taught content
• The potential hazards of laser, intense light sources and aesthetic energy-based devices • The principles of risk assessment and management • Hazards and risks identification through risk assessment • Putting procedures in place to ensure risks are minimised • Emergency planning strategy to include safety actions, including shutting the laser down, securing the area, obtaining medical help, ensuring that there are designated staff with clear roles, raising the alarm, training personnel and continually reviewing the plan to ensure it is current. Seeking ophthalmologist support within 24 hours if eyes are involved in an emergency • Comprehensive training for all staff to ensure competence • Protocols to follow during consultation • Written and verbal post-care for client • Adherence to suppliers'/manufacturers' guidelines regarding moving, storage, maintenance and servicing, sanitising, operation • Implications of not conducting safety checks, quality assurance testing and preventative maintenance • Hazards to eye and skin from accidental exposure and reflection • Risks associated with compromised tactile response in the treatment area post-surgery/trauma for example, C-section • Hazards of performing laser in areas that are pigmented or contain pigmented lesions and how to respond • Implications of not applying the laser hand piece at the correct angle and distance or using a laser hand piece/applicator head/filter which are chipped or cracked or not inserted correctly • Consequences of working outside the agreed treatment area and the possibility of excessive overlap • Pigmentation changes in skin due to poor selection of parameters for skin colour and skin classification, not adhering to pre and post care instructions, incorrect wavelength and parameters used for skin classification and condition being treated • Scarring due to incorrect parameters for skin classification, poor assessment of skin condition and suitability for treatment, incorrect post-treatment care and/or infection of the skin, poor client compliance post-treatment • Contra-actions and adverse reactions • Avoidance of injuries, burns, redness, swelling, weeping skin, hyperpigmentation, cold sores, acne outbreak, viral infection, bacterial infection and scarring • Risks associated with performing laser procedures over atrophy, hypertrophic and keloid scarring

LO2 Comprehend protocols and guidelines when providing skin rejuvenation treatments using laser systems

Factors to consider and treatment planning
Taught content

- Identify client's 'wants', needs, concerns, expectations, anticipated costs, and treatment objectives. Agree realistic outcomes against client expectations, discuss expected treatment sensations, pain tolerance, and potential risks relevant to laser procedures and the importance of considering the physical and psychological wellbeing of the client to receive laser treatment
- Results from skin test patch and skin analysis including identification of skin type, characteristics, skin conditions and lesions. Consideration to specific areas of concern to assist appropriate treatment planning and identification of achievable treatment outcomes. Inclusion of skin classification systems to include:
    - Fitzpatrick skin type – classification based on skin's response to UV exposure
    - Monk's scale – a culturally inclusive scale that considers melanin density and ethnic diversity
    - Lancer scale – evaluation of skin tone and pigmentation, often used in conjunction with Monk's scale for greater accuracy
    - Phenotypes and genotypes – exploration of genetic predispositions (genotypes) and observable traits (phenotypes) in skin behaviour and treatment response, integration of Monk's scale and Lancer scale with this enhances authenticity and a more precise skin assessment
    - Glogau photodamage – assessment of photoaging and wrinkle depth
- Considerations to form a treatment plan including skin thickness, hydration levels, skin types, skin conditions for example, laxity, hypo and hyperpigmentation, congestion, pustules, fragility, vascular considerations, dehydrated skins, and those prone to photo sensitivity, dull skin types and acne considerations including grading
- Identify client's medical history, emotional and physical condition, previous treatments to improve skin appearance, previous treatments on the skin in the area to be treated, sun exposure/tanning history, fake tan application, skin classification and skin condition to assist in choice of the appropriate treatment and to identify realistic and achievable treatment outcomes
- The importance of acknowledging and understanding when underlying factors will affect the success of the treatment and of selecting treatment specifications and variables to suit different skin classifications and skin types
- Previous skin/body salon treatments – details of type of treatment, frequency, dates the treatments were received, to ensure enough time has passed for laser to be appropriate and to gain an insight into the client's approach to aesthetic treatments
- Satisfaction and results. Dissatisfaction could indicate body dysmorphia or client with unrealistic expectations. Protocols for how this should be managed
- The importance of planning treatment times after previous skin rejuvenation treatments to ensure sufficient time has passed for laser treatments to be appropriate

- Legal aspects of the responsibilities of the practitioner in providing laser treatments and the importance of working within the remit of qualification boundaries and competence
- Pre and post-treatment advice, healing process including likely or expected reaction, contra-actions or adverse reactions, recommended skin care/post care, diet and lifestyle advice/choices or restrictions that could positively or negatively impact on the effects of treatment including current skin/body care regime and any revisions required and to ensure client is suitable for treatment
- Medical history and any absolute or relative contra-indications that prevent or restrict treatment to ensure client is safe for treatment or if medical/other professional referral is required
- Aims of treatment – in line with client's needs and treatment objectives
- The factors influencing treatment results for example, general health, previous skin rejuvenation methods, age, rate of cell regeneration, and consideration of other factors that may inhibit response to treatment and collagen production such as diet, lifestyle, stress, smoking, alcohol, medications, illness, environmental stress, hormonal influences, photo damage
- The number of treatments required for skin rejuvenation dependent on the size and extent of the area and condition to be treated
- Potential cost of treatments including fee structures and treatment options, frequency, duration and potential number of treatments recommended to achieve desired treatment outcomes including likely associated timeframes
- Treatment plan should be clearly agreed between the client and practitioner and recorded on the consultation documentation with client signing to indicate informed client consent

Assessing skin characteristics

Taught content

- Assessed through questioning at consultation and observation of skin, importance of using skin diagnostic equipment, such as Wood's Lamp, light magnifier/glasses, skin scanner/diagnostic technology
- How to assess and recognise skin health characteristics – Fitzpatrick scale, Glogau photo damage, Lancer scale, phenotype and genotype, level of sensitivity, thickness/density of skin, epidermal thickness, healing capacity, hereditary and ethnic influences
- Understand the consequences of inaccurate identification of client's skin type and the different side effect profiles for each skin type, skin density, colour and density and the appropriate parameters to use
- How to match the treatment to appropriate skin characteristics, skin classifications, individual's treatment area(s), treatment aims and objectives
- Consequences of poor assessments can include:
    - Prickling, excessive redness, localised swelling, urticaria reaction, tenderness. Additionally, you may see some blistering, burning, hypo and hyperpigmentation, excessive oedema, bruising, scarring, oozing and crusting. You may see some eye injuries, but this should be prevented by choosing the correct eyewear
- Reasons for choosing laser procedures and protocols to suit the variations in skin sensitivity, all skin classifications and treatment objectives

Pre and post-treatment advice to provide to the client
Taught content
• Provide consultation to discuss possible achievable outcomes and pre-treatment preparation • Pre-treatment advice should include a 2-4 week skin care preparation, the benefits of implementing a skin care routine to prepare the skin for treatment and maximise results, preparation programme to be used at home to increase desquamation and general texture/condition of the skin and improve healing capacity and tolerance to laser procedures. 28 days prior to treatment – importance of not sunbathing/using sunbeds, 10 days prior to treatment avoid the use of self-tanning products and wear a minimum SPF30+ broad spectrum UVA protection daily. The use of a tyrosinase inhibitor 30 days before treatment may slow or block out the production of melanin by inhibiting the tyrosinase enzyme. It is used to reduce or prevent hyperpigmentation such as dark spots, sunspots melasma, and Post Inflammatory Hyperpigmentation (PIH). Common tyrosinase inhibitors are hydroquinone kojic acid and azelaic acid • The positive effects of performing laser on a healthy skin in comparison to compromised skin conditions • Explain and agree achievable outcomes based on the assessment of the skin type, condition and area to be treated and underlying factors affecting skin health • Explain how the treatment improves the skin and the effects of laser on the skin condition treated and the physical structure of the skin • The physical sensation created by the treatment to the client; likened to a mild stinging or slight pain like a rubber band snapped on the skin, this can be more painful on more sensitive areas, soft tissues, underarm, upper lip, or close to bone, during menstruation or ovulation • Typical skin reaction immediately during or after treatment; erythema, darkening and micro crusting after treatment of sun induced dyschromia • Post-treatment physical sensation and appearance; all physical sensations and effects post-treatment depend on type of device used, technique and area treated. Appearance of skin on; - Day 1 – erythema and redness - Day 2 – possible slight erythema. Localised redness and swelling may also be seen, petechiae, minor swelling and blistering are rare but can occur, blistering is rare but can occur and can take anywhere between 4-10 days to fully heal, if bruising occurs will resolve within 7-12 days post-treatment • Possible treatment occurrences typically 2 to 4 hours post-treatment adverse reactions may occur; excessive prolonged erythema, blistering of the skin, excessive swelling inflammation and itching, sensitivity, hyperpigmentation, hypo-pigmentation, infection/cellulitis • Post-treatment hypo/hyperpigmentation. Sun avoidance is essential, prevent exposure with minimum SPF 30+ and UVA. Pigmentation changes generally resolve within 12 months but can be permanent. Darker skin types are more vulnerable to pigmentation changes within the skin a few days after treatment • Provide verbal and written post-treatment aftercare advice, to include using cool packs/cool compress (not ice packs) post-treatment to minimise redness, swelling and to reduce client discomfort. Avoid make-up, perfume, deodorants and face or body creams on the area. Hot baths/showers/heat treatment/perfumed products must be avoided for 24-48 hours post-treatment – treatment area should be patted dry. Avoid tight clothes. If blistering or

crusting occurs, the crusts must be left in place and not picked off. If skin is broken, all products must be avoided until skin has healed
- Post-treatment skincare products to be used post-treatment – cooling aftercare products, physical SPF minimum 30 and UVA broad spectrum protection daily
- Darker skins are more prone to Post-Inflammatory Hyperpigmentation (PIH), the use of a tyrosinase inhibitor daily after treatment may reduce the risk of hyperpigmentation
- Activities to avoid that might cause contra-actions or adverse reactions, extremes of temperature and heat, contact with water, activities which cause sweating, exposure to UV light
- Advise how to care for the area between treatments including any restrictions which may positively or negatively impact the effects of treatment including current skin/body care regime and any revisions required
- Advice offered on alternative treatments if laser is found unsuitable for example, prescription products, tyrosinase inhibitors, dermaplaning, microdermabrasion, skin peels, mesotherapy, LED, IPL, micro-needling, HIFU, radiofrequency, ultrasound, electroporation, depending on the condition being treated

Timing and intervals of treatments
Taught content

- Identify and understand commercial timings for and intervals between treatments, treatments to the same area should be spaced 4 weeks apart to allow for full natural cell regeneration to occur
- Recognise variations in timings depending on skin reaction time and recognised influencing factors; skin type, skin density, skin condition to be treated plus other contributory factors
- Approximate skin rejuvenation treatment times:
    - Face: 20 minutes
    - Neck: 10 minutes
    - Décolleté: 15 minutes
    - Underarm: 20 minutes
    - Lower arm: 20 minutes
    - Back of the hands: 10 minutes

Pain threshold and sensitivity variations

Taught content

- Understanding the inflammatory response of the skin and the effects and associated risks of using Over The Counter (OTC) pain relief, such as Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), and the possible effect they may have on treatment and the healing process
- Recognising skin health/types and areas of the face and body that are more sensitive, fragile and reactive to treatment. Those that have more prominent and dilated dermal blood vessels and Fitzpatrick 4-6 may contribute to an exaggerated inflammatory response but may be dependent on hereditary/ethnic influences
- Understanding that treatments for clients may be more uncomfortable during menstruation or ovulation
- Laser treatment to be performed when the client is able to correctly identify different thermal and tactile sensations. It is essential that the client has full tactile sensation, tested using the 1-10 pain threshold scale when asked
- Any change of laser parameters or intensity to be tested prior to full application. Follow supplier/manufacturer instructions for laser application for each skin type, classification and condition as they may vary

Types and purpose of laser equipment and products

Taught content

- Alcohol-free skin cleansing products to remove all make-up/skin preparations, surface oils and debris in the area
- Treatment area mapping equipment – white pencil make-up, sharpener
- Ultrasound/conductive gel where applicable to the system
- LASER (Light Amplification by the Stimulated Emission of Radiation) – The light beam is typically monochromatic, coherent, and low divergence, how laser differs from Intense Pulsed Light (IPL)
- Types of light – polychromatic, monochromatic, coherent, non-coherent, defocused, parallel, single and multi-wavelength and how laser differs from IPL
- How the different types of optical radiation are produced, what types of active media are used, and emission modes and delivery systems
- The characteristics of coherent and non-coherent light and how they interact with target chromophores – melanin, haemoglobin, skin and water levels within the skin
- The characteristics of optical radiation emitted from different types of equipment as well as radiation – tissue interactions. The intended purpose of the optical radiation equipment
- Understand the classes of laser categorisation and the different types of laser equipment to treat different skin classifications and types, for example, Fractional, non-ablative, and applicator heads Ruby, (694nm), Alexandrite (755nm), Nd:YAG, (1064nm), KTP Frequency doubled, Nd:YAG (532nm)
- Identify the wavelengths, wavelength delivery, single/multiple pulsed shots, pulse duration and width, fluence, pulse delays, repetition, spot size
- Knowledge that various wavelengths will penetrate skin and eye tissue differently, depending on diffusion properties – reflection, transmission, scattering, absorption

- Specifications and variables of the wavelengths used in laser treatments, difference between millisecond (ms), nanosecond (ns) and picosecond (ps) pulses, for example:
    - Millisecond (ms) – a unit of time equal to 1/1000 of a second. A blink of your eye takes about 100-400 milliseconds
    - Nanosecond (ns) – a unit of time in the International System of Units (SI) equal to one billionth of a second, that is, 1/1000000000 of a second, or 10^{-9} seconds. A nanosecond is to one second, as one second is to approximately 31.69 years.
    - Picosecond (ps) – a unit of time equal to 1/1,000,000,000,000s. To understand how small that is, a blink of an eye takes about 0.3 seconds which is the same as 300 billion picoseconds.
- The specifications, variables and terminology of IPL in relation to treatment practice
- Power, energy, fluence, pulse repetition, pulse duration, single/multi pulse shots, spot size, capacitors – free discharge and partial discharge, different wavelengths, pulse width, pulse delays, difference between ionising and non-ionising radiation, difference between long pulse, nanosecond and picosecond technology, chilled and non-chilled sapphire head
- The process of selective photo-thermolysis with reference to light absorption by chromophores for skin rejuvenation. Photo-thermal effects and Thermal Relaxation Time (TRT)
- The electromagnetic spectrum – photons, joules optical region of the electromagnetic spectrum
- Melanin absorption spectrum refers to how melanin absorbs light across different wavelengths. Melanin absorbs the light most strongly at shorter visible wavelengths, decreasing absorption as wavelengths get longer especially above 800nm
- Principles of maximum permissible exposure and nominal ocular hazard distance (NOHD)
- Understand the effects of optical radiation on exposure to eyes, skin and other tissue. The effects of laser on the eye and skin and awareness of the hazards to eye and skin from accidental exposure and reflection
- Different types of skin classifications, scales and influences and the effect on treatment response. Ethnic variations of skin type such as Caucasian, Asian, African. Skin colours that can and cannot be treated and why
- Suitable aftercare products to cool and soothe the area, topical anti-inflammatories, antioxidants, broad spectrum sunscreen

Preparation and selection of equipment and products for treatment
Taught content
• How to set up a controlled and secure environment and prepare equipment, products and accessories on a clean trolley in an ergonomic manner, to prevent strain to the practitioner and to assist in the smooth application of treatment, for example, safety, time management, hygiene, organisation and professionalism • Necessity of selecting and checking that appropriate products, equipment and accessories are in good working order before the start of each treatment • The importance of good lighting and environmental considerations, for example, temperature and ventilation, no reflective surfaces, entry and exit points to be clear of obstacles, hazard warning on the external door, suitable services for waste management, windows covered by blinds and shutters, written procedure on how to switch off the laser, including any keys, and risk management checks to identify any hazards and emergency planning • Appropriate preparation for Personal Protective Equipment (PPE) and protective eyewear • Selection and preparation of equipment in line with supplier/manufacturer guidelines, parameters, and techniques according to: - Skin type and area to be treated - Treatment objectives – general skin rejuvenation, reduction of fine lines, improvement of skin texture, reduction of superficial telangiectasia/vascular lesions, improvement of superficial blemishes, improvement of pigmentation variations sun induced dyschromia - Skin characteristics – adaptations for Fitzpatrick scale, level of sensitivity, thickness of skin, epidermal thickness and hereditary/ethnic influences • Differentiate between various laser hand pieces/applicator heads in accordance with the skin classifications, characteristics, individual objectives and treatment area • Additional equipment as agreed with the client and treatment aims and objectives and additional products to calm and protect the skin post-treatment and minimise contra-actions or adverse reactions

Skin sensitivity, skin test patch and test shots prior to treatment
Taught content

- Basic testing for potential allergic reactions should be performed on clients with a history of product sensitivity
- Skin test patch – performed during initial consultation after client has agreed and signed informed consent. Client must sign the skin test patch form if separate to main consultation form
    - Testing for potential allergic reaction or adverse response (inflammatory response) to associated products. Skin test patch should be delivered 1 week prior to treatment and is located discreetly near the treatment area – behind the ear or inner side of forearm prepared as usual for treatment. Products to be applied as appropriate (following supplier/manufacturer instructions). Treat small section within area to be treated using the spot size to be used in treatment starting with suggested parameters, increase fluence until desired end points are reached, record all details including date, area performed, parameters and immediate response on client record
    - Evaluation of the skin test patch is made following 24-48 hours. Recording of results to include whether positive or negative and record date, location of test, products used, description of results, if positive full description of response and product used
    - A new skin test patch must be carried out on all areas to be treated and for any change in parameters throughout the treatment process also when parameters are increased during the course of treatments or with any change of equipment
    - Written aftercare to be provided to and signed for by the client following test patch
    - Follow supplier/manufacturer instructions and organisational protocols for recommended time between required patch/sensitivity tests and skin rejuvenation treatment
    - Skin test patch must be performed all new clients, at least yearly on existing clients or if any adverse effects/reactions occur
    - Laser skin rejuvenation treatment to be performed when skin test results are negative
- Skin sensitivity test performed during initial consultation after client has agreed and signed informed consent. Client must sign thermal/tactile test form if separate to main consultation form
    - Testing to ensure the client has unimpaired sensitivity to stimuli – heat and pressure. Clients with history of lack of sensitivity have an increased risk of overtreatment. Perform test on treatment area, prepared as usual for laser skin rejuvenation treatment. Tactile sensitivity test using the soft and sharp ends of a cut cotton bud, thermal sensitivity test using two test tubes/bottles; one filled with hot and one filled with cold water to be applied to the skin, evaluation of the skin test to be confirmed verbally with the client. Records of results to include whether the client can tell the difference in sensations, date, location of test, and methods used, description of results, if positive a full description of responses given. Laser skin rejuvenation treatment to be performed when the client is able to correctly identify different thermal and tactile sensations
    - A test shot for the equipment must be performed before any treatment to ensure that the equipment is functioning correctly

Preparing the area prior to treatment

Taught content

- Cleanse the skin prior to treatment – to remove all make-up, creams/lotions, surface oils and debris
- Typical products used – cleansers, toners, alcohol-free cleanser/wipes/skin antiseptic, ensure area is dried thoroughly
- Mark out treatment area with a sharpened white make-up pencil where necessary to ensure treatment precision, cover moles/lesions and tattoos/semi-permanent make-up leaving a 1cm border
- Apply appropriate Personal Protective Equipment (PPE) – suitable protective eyewear

Method of application

Taught content

- Reasons for working systematically and methodically ensuring even and full coverage, overlapping technique where applicable to the system and in line with supplier/manufacturer protocols avoiding excess treatment overlap across the treatment area
- Reasons for working within the agreed treatment area and avoiding contra-indicated areas
- Plan treatment start and end point
- Following supplier/manufacturer protocols, use the hand piece/applicator head/filters at the correct angle, pressure, direction and speed with the correct settings and parameters
- Maintain adequate skin support in all treatment areas, manipulating the skin and adapting as appropriate to ensure hand piece/applicator head/filter remains in contact at the correct angle avoiding discomfort or causing injury
- On completion of treatment return machine to standby/safe mode sanitise and return hand piece to holder
- Apply cooling compress/products/aftercare lotion where appropriate to soothe treatment areas, apply SPF factor 30+ to exposed areas
- Problems associated with uneven treatments, working outside the marked area or over contra-indicated areas, overlapping and possible adverse reaction or injury

Adaptations to treatment

Taught content

- Adapt the treatment taking into consideration pre-existing conditions
- Omit treatment to pre-existing lesions such as skin tags, moles, papules, pustules which must be covered
    - Why it may be necessary to adapt direction, duration and the number of passes for different areas of the face and body
    - Give clear instruction and guide the client to change expression/position to ensure all treatment areas are fully accessible
- Treatment progression to include adaptations to energy, time spent on problem areas based on client feedback, and identification of areas where the results are slightly less. Adaptations to energy need to be +/- increments of one, with considerations that the client has become more desensitised to laser after their first application
- Areas to avoid or needing special consideration
    - Eyelids, inside the periorbital rim area, over keloid scarring, pustular lesions, moles/pigmented lesions, skin tags, pigmented birthmarks, thyroid cartilage area heart band also on the palms of hands and soles of feet, tattoos, semi-permanent make-up, mucosal surfaces
    - Do not direct light into any open orifices for example eyes, nostrils, ears, mouth
    - In the case of braces/fillings, place damp cotton wool in the client's mouth to reduce sensitivity

Uses, limitations, benefits and effects of laser products and equipment

Taught content

- The clinical outcomes expected from skin rejuvenation treatments using laser, Intense Pulsed Light (IPL) and energy-based devices
- The types of skin which are unsuitable or less likely to respond to treatment, darker Fitzpatrick skin types in accordance with supplier/manufacture guidelines
- Where topical applications of products or treatments require a certain time lapse prior to laser skin rejuvenation treatment in the same area
- Benefits – stimulates collagen production, removal of blemishes such as broken capillaries, uneven pigmentation, sun damage/dyschromia, redness, control of acne, minimises the signs of ageing
- Effects – improved appearance, improvement of photo aged skin, improved appearance blemished skin, improved skin texture, more even skin tone, reduction in wrinkles

Contra-actions associated with the treatment

Taught content

- Effects and risks of using excess pressure, incorrect angle or direction of the hand piece/applicator head/filter, uneven application, gel pockets, or non-compliance to safety and hygiene practices
- Contra-actions and adverse reactions – erythema, blistering, bruising, burns, dizziness, excessive discomfort, excessive perifollicular erythema, excessive perifollicular oedema, frazzling of hair, hyperaemia, irritation, oedema, oozing and crusting, petechia, pigmentary changes, hyper or hypo pigmentation, Post-Inflammatory Hyperpigmentation (PIH), scarring, skin greying or whitening, smell of burning hair, urticaria
- How to avoid and manage contra-actions/adverse reactions/complications at home, and when to refer to a medical practitioner

SPF and UVA specific sun protection

Taught content

- Why it is necessary to use a minimum of a UVB SPF 30 and UVA specific sun protection post-treatment
- Knowledge of SPF rating system and why high % of block is required to protect the skin after laser treatments
    - SPF 15 = 93% UVB block*
    - SPF 30 = 97% UVB block*
    - SPF 50 = 98% UVB block*
- Knowledge of UVA specific sun protector rating – star rating and the difference between physical and chemical sun cream

*approximate levels of block provided

Preventing infection and promote healing

Taught content

- Understand the products necessary to prevent infection and promote healing, how they should be used before and after laser treatments, soothing products to be applied post-treatment to cool, calm and encourage skin recovery
- To prevent infection – ensure skin is clinically clean, use of antiviral suppressant to reduce the incident of post procedural herpes simplex outbreak
- To promote healing – post-treatment calming products/treatments with anti-inflammatory effects, cooling products, cool compress

LO3 Comprehend the relevant anatomy, physiology and pathologies for skin rejuvenation treatments using laser systems

Structure and functions of the skin and relevance to laser skin rejuvenation treatments
Taught content

- Epidermis – stratified epithelial tissue, stratum germinativum, stratum spinosum, stratum granulosum, stratum lucidum, stratum corneum
- Cell structure and types in the skin, mitosis, epidermal lipidity and hydration, epidermal tissue differentiation, keratinisation, natural desquamation and melanin synthesis
- The defensive role of the epidermis and the importance of the Natural Barrier Function (NBF) and implications of compromised NBF
- The role of melanocytes, keratinocytes and fibroblasts in promoting and rejuvenating healthy skin
- Melanogenesis to include Post Inflammatory Hyperpigmentation (PIH) plus causes and recognition of hypo and hyperpigmentation pigmentated lesions, recognition and causes for example vitiligo, solar/seborrheic keratosis, actinic keratoses, lentigines, ephelides, chloasma, melasma, poikiloderma of civatte, skin cancers
- Dermis – blood/lymph supply, papillary layer, reticular layer, extra cellular matrix-collagen, elastin, hyaluronic acid, dermal cells, mast cells, fibroblasts, macrophages and neutrophils, proteoglycans, glycosaminoglycans (GAGS)
- Extra Cellular Matrix development, function, degeneration and regeneration including importance of collagenase and elastase in the wound healing process
- Sensory nerve endings (Meissner's corpuscles, Pacinian corpuscles, Merkel's discs, Ruffini corpuscles)
- Hypodermis – subcutaneous layer, adipose tissue, adipocytes
- Functions of the skin – secretion, heat regulation, absorption, protection, elimination, sensation, vitamin D production, melanin production, understand the process of keratinisation
- Basic skin types:
    - Balanced – fine texture, no visible pores, smooth, supple, flexible
    - Oily – shiny, slight thickening, sallow, coarse texture, enlarged pores, congestion, comedones
    - Dry – lacks moisture, dry to touch, flakiness, fine texture, thin, tight, small pores, broken capillaries, ageing
    - Combination – combination of two or more skin types, usually oily T-zone, balanced or dry on cheeks
- The inflammation process including Post Inflammatory Hyperpigmentation (PIH)
- The impact of compromised healing process and how to recognise and respond to it
- Types of collagen 1, 3 and 7
- Vascular lesions and common skin disorders for example acne rosacea, telangiectasia, cherry angioma, Campbell de Morgan spots, spider naevus, sebaceous hyperplasia and keratosis pilaris

Associated pathologies and relevant terminology of the skin

Taught content

- Allergic reaction, bruise, benign, bulla, crust, erythema, excoriation, fissures, haemangioma, hyperaemia, inflammation, keloid, macule, malignant, papule, pustule, nodule or cyst, oedema, scales, scar, tumour, ulcer, vesicle, weal, weeping, chilblains, couperose, telangiectasia, comedones, crow's feet, hyper-keratosis, milia, pseudo folliculitis, urticaria, hyperpigmentation, hypopigmentation, atopic eczema, atopic dermatitis, psoriasis, acne vulgaris, acne rosacea, seborrhoea, boils, carbuncles, folliculitis, impetigo, herpes simplex, herpes zoster, warts, verrucae, candida, tinea corporis, albinism, chloasma, dermatitis, dermatosis papulosa nigra, ephelides, lentigo, leucoderma, naevae, papilloma, port wine stain (capillary naevus), vitiligo, scabies, sebaceous cysts (steatoma), skin tags (fibroma, verrucae filiformis), spider naevi, styes, xanthomas, prickly heat (miliaria rubra), Basal Cell Carcinoma (BCC), Squamous Cell Carcinoma (SCC), melanoma – benign/malignant

Principles of controlled wound healing

Taught content

- The uses and implications of controlled wound healing to the practitioner
- Principles of inflammation and healing devices of the skin. Wound healing is a complex and dynamic process of restoration of skin cell structures and tissue layers
- Influential factors in the efficiency of wound healing responses
- The four principles and processes of wound healing – haemostasis, inflammation, proliferation, remodelling; actions of arachidonic acid cascade, Merkel and Langerhans cells, red and white blood cells, the clotting process, platelets, fibrin clots, types and roles of growth factors in the healing response, re-epithelialisation, reformation and building of the basement membrane, mitosis leading to epidermal regeneration, rebuilding of the extra cellular matrix and early collagen; formation characteristics of type 3 collagen, collagen remodelling and the conversion of collagen from type 3 to type 1. Characteristics of collagen type 1
- Phases of skin healing – haemostasis instant phase, inflammatory phase (occurs immediately following the injury and lasts approximately 6 days), fibroblastic phase (occurs at the termination of the inflammatory phase and can last up to 4 weeks), scar maturation phase (begins at the 4th week and can last for years)
- Keloid scarring – occurs when the skin produces an excess of collagen after an injury. Clients with Fitzpatrick 3, 4,5 and 6 are more likely to experience this complication to the wound healing process. Clients with this complication are contraindicated for laser treatments
- Factors which interfere with wound healing/trauma – initial or repetitive, scalds and burns (both physical and chemical), animal bites or insect stings, pressure, vascular compromise, arterial, venous or mixed, immunodeficiency, malignancy, connective tissue disorders, nutritional deficiencies, psychosocial disorders, adverse effects of medication
- The relevance of the lymphatic and circulatory systems to laser skin rejuvenation treatments

LO4 Demonstrate how to consult, plan and prepare for skin rejuvenation treatments using laser systems

Use consultation techniques to determine the client's treatment plan

Taught content

- Consult with client, implementing a range of appropriate communications skills to identify client's treatment objectives, expectations and desired outcomes with associated timescales to ensure a realistic and achievable treatment plan is agreed
- Use illustrative diagrams and images to assist client understanding of the clinical outcomes expected from skin rejuvenation treatments using laser systems and give clear and appropriate advice and recommendations to the client to determine and agree the final treatment plan including associated timeframes to see best possible results
- All information from the consultation to document in the presence of the client – electronically/digitally/paper-based, at the beginning of every treatment
- Obtain the client's agreement and signed informed consent to treatment and all required visual media records prior to all treatments
- The practitioner and client must understand the implications of informed client consent, what is being agreed and the responsibility of each in terms of liability

Consult with the client

Taught content

- General information
- Relevant medical history – discuss all areas on consultation documentation including any recent herpes simplex, certain medications including anti-coagulants
- Lifestyle information – smoking, diet, water intake, current skin care routine that may need to be considered, sun exposure, hobbies
- Skin classification – assess Fitzpatrick scale, Lancer Scale, phenotype and genotype and Glogau photo damage, hereditary and ethnic influences
- Fully explain the treatment process, sensation and post-treatment sensation and appearance – no significant down time however skin may feel warm and tender with erythema present
- Explain potential risks/side effects/adverse reactions and contra-actions – mild oedema, oozing, crusting, welting, tenderness, momentary discomfort during treatment, possible contra-actions and adverse reactions including likely duration

Explain the cooling off period

Taught content

- Provide information to the client regarding the 'cooling off' period and offer this facility between initial consultation and first treatment. Book first treatment in line with given directives on cooling off periods and taking into consideration sufficient time for skin test patch to be undertaken. Give client verbal and written information regarding the associated risks, aftereffects, possible contra or adverse reactions including any downtime, homecare/additional routines or modifications to current routines required, proposed outcomes and agreed treatment plans with appropriate time scales needed to achieve proposed desired outcome

Establish the condition of the skin
Taught content
• Use magnifying lamp/glasses or skin diagnostic equipment (Wood's Lamp) and perform a visual assessment of the condition and health of the skin, documenting all findings • Skin characteristics – skin types, Fitzpatrick scale 1-6, skin conditions, density/thickness of skin, epidermal thickness, healing capacity, hereditary/ethnic influences • Skin type, skin conditions, surface hydration, hyper/hypopigmentation, photo/sun damage, vascular lesions, primary and secondary lesions, textural irregularities or keloid scarring, skin texture (pore size), skin laxity, static and dynamic wrinkles, congestion/excessive oil, overall skin health and suitability for treatment • Identify contra-indications that may restrict, prevent or require medical referral

Explain the treatment procedures to the client
Taught content
• Equipment checked, sanitised and left in safe/standby mode whenever not in use • Positioning required for treatment, ensuring client comfort and full access to treatment area(s) • Product and equipment including hand piece/applicator head/filter selection and setting of parameters to match treatment objectives and agreed treatment plan • Tests required, thermal, tactile and skin test patch and test shot preceding treatment • The area will be cleansed thoroughly with appropriate cleansing products until all make-up, lotions, debris and surface oils are removed and cotton pads appear clean • Alcohol-free cleanser/wipes/skin antiseptic, ensure area is dried thoroughly • Pre-treatment visual media records to be taken from all appropriate angles • Map out the treatment area in a grid with white make-up pencil, cover any contraindicated areas (moles/lesions/abrasions) or tattoos/semi-permanent make-up • Protective eyewear to be worn by both practitioner and client throughout the duration of the treatment • Once set up, inform the client where the treatment will begin (depends on area being treated) • The area will be treated following supplier/manufacturer protocol in a methodical and systematic manner within the mapped-out area and including test shot before treatment begins • Explain the method of laser procedures and adaptations as required – such as equipment settings, parameters, wavelengths, duration of contact, direction, pressure, physical sensation, smell, sound and adaptations as appropriate • After treatment ultrasound/conductive gel to be removed thoroughly and a cool compress/cooling products will be applied to the area • Post-treatment visual media records to be taken from all appropriate angles • Broad spectrum sun protection UVB and UVA is finally applied to protect the skin, explain the use of physical sun protection and the benefits of using a tyrosinase inhibitor to prevent Post Inflammatory Hyperpigmentation (PIH)

- Explain potential risks/side effects/adverse effects – erythema, mild oedema, welting, oozing, crusting, tenderness, momentary discomfort during treatment, possible contra-actions and adverse reactions including likely duration
- Aftercare and home care advice including the revision of skincare regime for the area between appointments if applicable

Take pre-treatment visual media records
Taught content
• Following organisation procedures, industry guidelines and current data protection legislation, ensuring protocols are followed for taking clinical visual media records to ensure clarity and consistency. Take visual media records in same position as post-treatment visual media records and where possible in the same light. Position area to be treated so visual media records are taken straight on and from both sides where applicable • Personal devices should not be used to take images of clients • Gain written/signed client consent for photography and storage of clinical visual media records and specific use of visual media records for treatment evaluation, marketing and teaching purposes

Carry out skin sensitivity tests
Taught content
• Carry out sensitivity tests in accordance with supplier/manufacturer guidelines and organisational requirements • Thermal and tactile tests, check skin test patch and test shot before treatment • Client must sign skin sensitivity/thermal/tactile/test patch forms if separate to main consent form

Select suitable equipment and products
Taught content
• Select suitable equipment and products according to treatment objectives • Choose the correct equipment and hand piece/applicator head/filters suitable for treatment objectives and skin classification identified in the agreed treatment plan

Select appropriate Personal Protective Equipment (PPE)
Taught content
• Use of PPE (disposable gloves non-latex, disposable masks) that fit the individual correctly so as not to interfere with work, worn correctly each time, used and disposed of after each use • Suitable protective, eyewear check wavelength filter range and compliance markings for example, CE marked, compliance with BE EN 207 • All PPE stored correctly, checked and maintained so fit for purpose

LO5 Demonstrate how to provide skin rejuvenation treatments using laser systems

Maintain own responsibilities for health and safety through the treatment

Taught content

- Ensure working area is set up and a safe working environment created in line with health and safety protocols and legislation
- Ensure door is secured and correct notices are made visible
- Ensure all reflective surfaces are covered
- Personal Protective Equipment (PPE) to be worn by both practitioner and client
- Working in an environmentally sustainable manner

Prepare, position and protect the client and self

Taught content

- Ensure preparation complies with legal and organisational requirements
- Prepare and protect client to preserve modesty. Protect client's eyes, hair where appropriate, protect and/or cover dark clothing, request removal of clothing as appropriate
- Ensure skin is cleansed, free of make-up, oils, lotions, deodorants, debris and ensure the skin is dry prior to treatment
- Mark out the treatment area with white make-up pencil to ensure treatment precision and cover and avoid moles/lesions and at least 1cm away from all types of tattoos/semi-permanent make-up
- Ensure the area is dry, apply ultrasound/conductive gel evenly to the area as appropriate, ensuring minimum wastage, and in line with supplier/manufacturer guidelines
- Apply appropriate Personal Protective Equipment (PPE) – suitable protective eyewear – client and practitioner
- Position the client to meet the needs of the treatment, clearly instruct the client and, if required, use supports or pillows to ensure the position fits the needs of the treatment, does not compromise the treatment application and does not cause the client any discomfort
- Ensure effective, ergonomic positioning of couch, trolley, stool, equipment, accessories, and products to avoid injury to self, client and others
- Ensure own posture and working methods minimise fatigue and the risk of injury to self, the client and others
- Ensure the working environment is private and secure. Depending on area to be treated provide modesty towels/disposable tissue to protect clothing and provide modesty so the client does not feel exposed and vulnerable

Ensure environmental conditions are suitable for treatment

Taught content

- Ensure the working environment (controlled area) is private and secure and all notices are displayed correctly and visible
- Ensure extraction, ventilation, temperature, ambience, lighting, shiny surfaces covered including mirrors, wall and floor coverings are fit for purpose
- Ensure all tools and equipment and accessories are ergonomically placed and in safe working order
- Ensure appropriate PPE for both client and practitioner are in line with treatment protocols
- Ensure risks and hazards have been checked, for example slip and trip hazards in the working area

Ensure the use of clean equipment and materials

Taught content

- Ensure all surfaces are clean and hygienic, trolley is tidy, equipment and accessories are sanitised and products set out ergonomically
- Ensure that PPE is available and fit for purpose – clean, disposable, non-latex gloves and mask for working in close proximity (as appropriate)
- Ensure use of sterilisation and disinfectants for surfaces as required for treatment
- Ensure use of sterilisation and disinfectants for equipment and accessories are in accordance with supplier/manufacturer guidelines

Safely use equipment, materials and products

Taught content

- Follow protocols for safe use including correct use of laser systems, selection, handling, loading, unloading/changing and sanitising of hand piece/applicator head/filters and application technique
- Keep tops on bottles, make sure all products are labelled clearly in line with Control of Substances Hazardous to Health (COSHH)
- Ensure hand piece is cradled when not in use and equipment safe/standby mode is activated before, during and after treatment as appropriate

Prepare the area for treatment

Taught content

- Ensure the client's skin is clean, sanitised, dry and prepared for skin rejuvenation treatment:
    - Cleanse with an appropriate alcohol-free cleanser/wipes/skin antiseptic to ensure all make-up, surface oils, lotions and debris are removed thoroughly. Protect vulnerable areas of face/body as indicated
    - Mark out treatment area with white make-up pencil where necessary to ensure treatment precision, cover moles/lesions and tattoos/semi-permanent make-up leaving a 1cm border
    - Apply appropriate Personal Protective Equipment (PPE) – suitable protective eyewear, check wavelength filter range
    - Follow supplier/manufacturer protocols/recommendations for example, use of ultrasound/conductive gel evenly to the area as appropriate, ensuring minimum wastage and in line with supplier/manufacturers guideline

Perform skin rejuvenation treatment
Taught content
• Provide skin rejuvenation treatment using laser systems by using the correct techniques and in accordance with suppliers/manufacturers procedures and protocols at all times • Illuminate the area to be treated if required to ensure maximum visibility • Check consultation form for parameters used at last treatment (if applicable) • Check preparation of treatment area; clean and dry prior to treatment • Check and apply appropriate protective eyewear for the practitioner and the client ensuring compatibility with wavelength being used • Select the appropriate hand piece/applicator head/filters for treatment objectives, size of area and all characteristics • Perform visual check of the machine to ensure it is in full working order and ensure the hand piece/applicator head/filter is clean, intact and attached securely. Ensure applicator head is clean and inserted correctly (if not already part of the hand piece), ensure the applicator head does not exhibit cracks or chips. • Enable and set equipment parameters and variables in line with supplier/manufacturer instructions and treatment aims and objectives, refer to previous treatment settings (if applicable) • Position the client comfortably preserving client modesty where appropriate • Carry out a test shot to establish response and suitability to treatment, observe and evaluate clinical end points required for effective treatment • Work in a methodical and systematic manner to ensure full and even coverage of the agreed treatment area ensuring duration of contact does not exceed recommended time, keeping within the mapped area to avoid uneven treatment/excessive overlap or overworking the area. Avoid areas/lesions as contra-indicated and/or agreed in the treatment plan • Reassure the client and communicate positioning instructions clearly throughout treatment • Continually discuss sensation and check client level of comfort and wellbeing throughout treatment using the 1-10 pain threshold scale, adjust equipment settings and parameters as appropriate to each area to ensure client comfort and effective treatment • Visually monitor the area throughout treatment to observe and evaluate clinical end points required for effective treatment, adjust equipment settings and parameters as appropriate to each area to ensure full and even coverage and effective treatment • Know when to stop/adapt or adjust treatment parameters as appropriate • Conclude treatment by sanitising and securing the hand piece and returning equipment into safe/standby mode • Remove ultrasound/conductive gel from the area and dispose as appropriate • Apply appropriate aftercare products – cool compress, cooling agent, SPF 30+ • Ensure treatment is completed in a commercial time frame • Record treatment parameters and all treatment details on consultation form • Collate, analyse summarise and record evaluation feedback in a clear and concise way

Monitor the skin reaction and client response
Taught content
• Communicate with the client regarding comfort, monitoring health, wellbeing and the sensations of treatment throughout • Continually check the client response gaining client feedback (1-10 pain threshold scale) • Visually monitor the skin's reaction and client skin response and comfort levels including degree of erythema and observation of desirable and undesirable clinical end points: erythema, mild swelling • Observe skin reaction and implement the correct course of action in the event of an adverse reaction including knowing when to adjust treatment parameters or stop treatment due to excessive pain/discomfort or erythema

Apply post-treatment products
Taught content
• Apply post-treatment products to cool, soothe and protect the treated area with appropriate products and procedures; cool compress, cooling gel, and cryo-cooling devices/products • Apply broad spectrum sunscreen – physical SPF 30 minimum with UVA and UVB protection

Take post-treatment visual media records
Taught content
• Follow protocols for taking of clinical visual media records to ensure clarity and consistency • Take visual media records in same position as pre-treatment visual media records and where possible in the same light • Position area treated so visual media records are taken straight on and from both sides where applicable • Personal devices should not be used to take or store images of clients • Confirm clients' consent for storage of clinical visual media records and specific use of visual media records for treatment evaluation, marketing and teaching purposes

Provide post care advice and homecare
Taught content

• Treatment area should be cooled post-treatment to minimise redness and to reduce any client discomfort
• Post-treatment products to be applied to cool and soothe and protect where necessary
• Aftercare advice to be given:
  - Avoid sun exposure or cover areas treated
  - Avoid touching the area treated
  - Avoid hot baths, hot showers/spa treatments/swimming for 24 hours
  - Avoid activities that may increase perspiration for 24 to 48 hours
  - Avoid tight clothing on the area treated for 24 hours
• No sun exposure for a minimum of 4 weeks prior to treatment and advise the use of sunblock or avoidance of sun exposure on the treated area on a continual basis whilst having treatment
• Provide aftercare advice on application of any professional products to soothe the area, for example cooling area with cool compress, soothing aftercare lotion
• Burn – apply cold running water if practical or cool compresses. Do not use iced water or ice
• Should a blister form in the area after a treatment leave intact. If followed by a scab or thin crust, keep clean and dry and allow to heal naturally. Any scabs or crust forms should not be removed
• Skin may develop temporary lightening (hypopigmentation) or darkening (hyperpigmentation) after laser treatment, both may be made worse by sun exposure. Pigment changes may be permanent, but will usually resolve within 12 months
• Discuss how to care for the area between treatments including any restrictions which may positively or negatively impact the effects of treatment including current skin/body care regime and any revisions required
• Ensure the client signs for receipt of written aftercare procedures
• Inform the client how to manage complications/adverse reactions at home and when to refer to a medical practitioner
• Document post-treatment complications and adverse reactions with advice given in line with legislative, insurance and organisational guidelines
• Evaluation of the laser procedure to inform future procedures, collate, analyse, summarise and record information gained from client feedback, client records and own observations
• Agree any alterations for future treatment with the client and record the outcome for further evaluation

Dispose of waste materials to meet legal requirements
Taught content
• Waste – disposed of in an enclosed foot pedal-controlled waste bin fitted with disposable, durable bin liner • Clean equipment and hand piece/applicator head/filters in line with supplier/manufacturer instructions and store correctly • Dispose of waste from the treatment, for example swabs/cotton wool pads, into clinical waste bags, in line with local council regulations and procedures of the country therein • Dispose of contaminated treatment waste and sharps in line with local council regulations and procedures of the country therein

Update client records
Taught content
• Accurate completion of treatment details including all settings and parameters hand piece/applicator head/filters, wavelength, fluence, pulse duration or width, pulse delay, pulse repetition rate, spot size, cooling devices, duration of application and reaction levels, client reactions, skin sensations and skin responses, observation of skin during and after treatment • Signature from client to be obtained accepting treatment results and skin response and agreement to follow all aftercare/post-treatment advice • Practitioner signature to take responsibility for treatment and records completed • Records filed and stored securely in line with current data protection legislation

Assessment requirements

Learners must complete all assessment requirements related to this unit:

1. External theory examinations
2. Formative treatment portfolio
3. Summative practical examination

1. External theory examination

Learners must complete a theory examination for this unit. This will consist of a multiple-choice question paper, which is mapped to the relevant assessment criteria stated below.

The theory examination will test knowledge and understanding from across learning outcomes 1-3. Learners should use the unit content sections of this unit to aid revision since exam questions will test the full breadth of this content over time.

Learning Outcome	Assessment Criteria
LO1 Interpret the environmental and safety considerations when providing skin rejuvenation treatments using laser systems	1.1 Promoting environmental and sustainable working practices
	1.2 Licensing regulations for aesthetic practitioners and premises
	1.3 Insurance guidelines
	1.4 Safety of product and equipment sourcing
	1.5 Suppliers' and manufacturers' instructions for safe use
	1.6 Working in line with organisational procedures
	1.7 Hygiene considerations
	1.8 Contra-indications that would prevent or restrict treatment
	1.9 Contra-indications requiring medical referral and referral processes
	1.10 When to consult with other aesthetic professionals
	1.11 Treatment of minors
	1.12 Hazards and risks

Learning Outcome	Assessment Criteria
LO2 Comprehend protocols and guidelines when providing skin rejuvenation treatments using laser systems	2.1 Factors to consider and treatment planning
	2.2 Assessing skin characteristics
	2.3 Pre and post-treatment advice to provide to the client
	2.4 Timing and intervals of treatments
	2.5 Pain threshold and sensitivity variations
	2.6 Types and purpose of laser equipment and products
	2.7 Preparation and selection of equipment and products for treatment
	2.8 Skin sensitivity, skin test patch and test shots prior to treatment
	2.9 Preparing the area prior to treatment
	2.10 Method of application
	2.11 Adaptations to treatment
	2.12 Uses, limitations, benefits and effects of laser products and equipment
	2.13 Contra-actions associated with the treatment
	2.14 SPF and UVA specific sun protection
	2.15 Preventing infection and promote healing

Learning Outcome	Assessment Criteria
LO3 Comprehend the relevant anatomy, physiology and pathologies for skin rejuvenation treatments using laser systems	3.1 Structure and functions of the skin and relevance to laser skin rejuvenation treatments
	3.2 Associated pathologies and relevant terminology of the skin
	3.3 Principles of controlled wound healing

2. Formative Treatment Portfolio

Learners must produce a treatment portfolio, which is required to be completed under the supervision of a teacher/assessor who must monitor the quality of the treatments performed throughout the learner's training, to ensure that they meet the given criteria. All treatments must be completed and marked prior to the learner completing the practical and theoretical examinations.

Treatment portfolio requirements:

Learners must complete **a minimum of 5 treatments** on **at least 3 different clients** covering the full scope and range related to the performance criteria.

Each treatment needs to include a full medical history of the client, advanced skin assessment, before and after visual media images, and a full description of the area to be treated. A detailed description of the application technique, equipment, hand piece and parameters used to include wavelength, fluence, pulse duration or width, pulse delay, pulse repetition rate, spot size, cooling devices, duration of application and reaction levels.

Each treatment must also include pre- and post-treatment skincare product recommendations, post-treatment advice, and reflective practice, including an evaluation of the procedure and its outcomes, with recommendations for ongoing treatments and associated time frames.

Evidence documents **must** include:

- A full consultation document must be evidenced, along with pre-and post-procedure visual media records
- All documents must be dated and signed by the teacher/assessor, learner and client, where applicable

Learning Outcome	Assessment Criteria
LO4 Demonstrate how to consult, plan and prepare for skin rejuvenation treatments using laser systems	4.1 Use consultation techniques to determine the client's treatment plan
	4.2 Consult with the client
	4.3 Explain the cooling off period
	4.4 Establish the condition of the skin
	4.5 Explain the treatment procedures to the client
	4.6 Take pre-treatment visual media records
	4.7 Carry out skin sensitivity tests
	4.8 Select suitable equipment and products
	4.9 Select appropriate Personal Protective Equipment (PPE)

Learning Outcome	Assessment Criteria
LO5 Demonstrate how to provide skin rejuvenation treatments using laser systems	5.1 Maintain own responsibilities for health and safety through the treatment
	5.2 Prepare, position and protect the client and self
	5.3 Ensure environmental conditions are suitable for treatment
	5.4 Ensure the use of clean equipment and materials
	5.5 Safely use equipment, materials and products
	5.6 Prepare the area for treatment
	5.7 Perform skin rejuvenation treatment
	5.8 Monitor the skin reaction and client response
	5.9 Apply post-treatment products
	5.10 Take post-treatment visual media records
	5.11 Provide post care advice and homecare
	5.12 Dispose of waste materials to meet legal requirements
	5.13 Update client records

3. Summative practical examination

The content of LO4 and LO5 are assessed by a practical examination.

The practical examination will be conducted by an external examiner.

In preparation for the practical examination, centres must ensure learners have completed the required number of formatively assessed complete treatments, in accordance with the practical assessment criteria for the qualification.

It is essential centres use the Practical Assessment Criteria document in order to prepare learners for the practical examination. This can be found on the VTCT Skills website.

The practical examination must take place under controlled conditions, in a realistic working environment on a real client and in a commercially acceptable time frame for the practical treatment being examined.

Practical scope and range

All scope and range must be covered across the formative treatment portfolio and summative practical examination.

- Dealt with **all** types of clients
  - New
  - Existing
- Carried out **all** consultation techniques
  - Questioning – verbal
  - Listening – non-verbal
  - Visual – non-verbal
  - Use of illustrative images/diagrams
  - Manual
  - Written
  - Pre-treatment visual media records taken
- Carried out **all** skin sensitivity tests
  - Thermal test
  - Tactile test
  - Skin test patch
  - Test shot
- Considered **all** influencing factors
  - Level of sensitivity
  - Fitzpatrick scale
  - Condition of skin
  - Healing capacity
  - Causes of skin condition
  - Site of skin condition

- Considered all skin classifications
  - Glogau photo-damage
  - Fitzpatrick scale
  - Lancer Scale
  - Phenotype and Genotype
- Taken all courses of necessary action
  - Explaining why treatment cannot be carried out
  - Encouraging the client to seek medical advice if applicable
  - Modification of treatment
- Met all treatment objectives
  - Reduction of fine lines
  - Reduction of superficial telangiectasia/vascular lesions
  - Improvement of superficial blemishes
  - Improvement of pigmentation variations
  - Improvement of skin texture
- Covered all treatment areas
  - Face
  - Neck
  - Torso (décolleté/chest/abdomen/back)
  - Limbs (legs/arms)
- Recorded all types of information
  - Name of the person treated (including a second means of identification, such as date of birth)
  - The date and time of treatment
  - The name and signature of the laser practitioner
  - The nature of the laser treatment given/equipment and handpiece/applicator head/filter used
  - The treatment parameters:
    - Wavelengths
    - Fluence
    - Pulse duration or width
    - Pulse delay
    - Pulse repetition rate
    - Spot size
    - Cooling devices
    - Duration of application
    - Reaction levels
  - Any adverse reactions
  - Gained signed acceptance of results, skin response and agreement to follow all aftercare/post-treatment advice given

- Provided all types of advice and recommendations
  - Initial aftercare
  - Suitable post care products and their uses
  - Suitable post care personal/skin hygiene procedures
  - Pre-treatment skincare products and lifestyle recommendations
  - Avoidance of activities which may cause contra-actions
  - Modifications to lifestyle patterns
  - Recovery and skin healing process
  - Post-treatment contra-actions/adverse reactions and how to deal with them
  - Future treatments needed and time intervals between treatments
  - Benefits and limitations of future maintenance treatments
  - Treatments which could be given or avoided in conjunction with/after skin rejuvenation using laser systems
  - Present and future products and treatments recommended
  - Use of SPF products
  - Use of tyrosinase inhibitors
  - Issuing of verbal and written post-care advice
  - Recording before and after visual media records
- Carried out all reflective practice
  - Evaluation to agree and inform future outcomes
  - Continued Professional Development (CPD)

Document History

Version	Issue Date	Changes	Role
v1	01/09/2026	First published	Development Administrator