



**University of
Sunderland**

Dodou, Kalliopi (2020) MSc Cosmetic Science syllabus.
[Teaching Resource]

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Programme Approval Document

This document will also be required to be updated at Periodic Review.

The following documentation will be required at approval:

- Approved ADC outline proposal
- Approval of Resources form
- Student Journey approval
- Programme Specification
- Module descriptors

- 1. Rationale for the programme** (see ADC outline proposal). Programme teams can provide additional information here if they feel that this will be of assistance to the Panel.

The aim of the MSc Cosmetic Science is to produce graduates who have the knowledge and skills to be employable in the Cosmetics, Personal Care and Fragrance industries in the UK and globally.

Graduates from the MSc Cosmetic Science will have expertise in the:

- Regulatory framework
- Formulation and Manufacture
- Quality control, safety and claims substantiation testing
- Business and marketing skills

related to the cosmetics, personal care and fragrance industries in the UK and globally.

Cosmetic Science is an area of strength within the School and Faculty. This MSc course is offering progression from our now established BSc Cosmetic Science. It also offers the opportunity to other graduates from related disciplines (Chemical Engineering, Chemistry, etc) to specialise in the higher-level knowledge and skills required by the cosmetics sector and become employable in it.

Students will be taught by staff and selected external experts and will gain skills and knowledge in a thematically coherent manner.

2. Standards

Please detail below how the proposed Programme meets:

[FHEQ](#)

See Appendix 1.

[Relevant Subject Benchmarks](#)

The MSc Cosmetic Science meets the descriptors for a Higher Education Qualification at Level 7, which are explained in the Frameworks for Higher Education Qualifications (FHEQ) document. The congruence between the Learning Outcomes of the proposed MSc Cosmetic Science, with the FHEQ Descriptors for Level 7 is explained on Appendix 1 of this document.

The Cosmetic Science subject is multidisciplinary and does not belong to a specific subject from those listed on the "Subject Benchmark Statements" document.

[Characteristics statements](#) (if applicable)

The following Characteristics statements are aligned with the MSc Cosmetic Science:

- The MSc Cosmetic Science is composed of structured learning opportunities. A third of the course (CSCM05; 60 credits) is devoted to a research project, leading to a dissertation research output.
- The MSc Cosmetic Science includes research methods training, as part of the module content in:
 - CSCM01: research methods on claim substantiation data collection, analysis and interpretation
 - CSCM02: research skills in formulation and quality control techniques
 - CSCM03: research skills in marketing, business and project management
 - CSCM04: research skills on the design of user trials and the methods of hair and skin testing for the evaluation of cosmetic products
 - CSCM05: conduction of an independent piece of creative research

[NICATS level descriptors](#)

The MSc Cosmetic Science meets all the NICATS Generic Level 7 descriptors. For example:

Intellectual skills and attributes:

- Display mastery of the legal framework and regulatory bodies for advertising cosmetic products and perfumes and how these regulations differ among countries. (CSCM01)
- Display mastery in the physiology of healthy and diseased skin; modes of skin aging; the interplay between genetic, hormonal and environmental factors; theory of skin testing methods; latest formulation trends eg microbiome, stem cells etc. (CSCM04)

- Display critical awareness of the advances at the forefront of a specific area of the cosmetic science discipline including understanding of specialised areas of cosmetic science (CSCM05)

Processes

- Display mastery of the manufacturing principles of cosmetics, including lab-scale and industrial-scale manufacture, types of equipment and critical manufacturing parameters, using appropriate examples. (CSCM02)
- Demonstrate expertise in the application of appropriate methods (objective and subjective) to evaluate skin properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage. (CSCM04)
- Display mastery of successfully conducting and writing up a piece of independent research by designing and applying appropriate research methods. (CSCM05)
- Demonstrate expertise in the debate and defence of the final research output in a viva voce. (CSCM05)
- Demonstrate the ability to disseminate research findings in poster format to an expert audience. (CSCM05)

Accountability

- Demonstrate expertise and initiative to devise a process for the design of a cosmetic product taking into consideration specific regulatory requirements and dilemmas (e.g. organic, preservative-free, borderline products) (CSCM01)
- Display the ability to make informed decisions on New Product Development (NPD) tasks, from raw material selection to critical evaluation of formulation scale-up and manufacturing processes, packaging and marketing. (CSCM02)
- Demonstrate accountability in planning and executing the development of a cosmetic product. (CSCM03)

Apprenticeship standards (if applicable)

The ESFA Standard and Assessment Plan is available from:

<https://www.instituteforapprenticeships.org/apprenticeship-standards/>

For apprenticeships, please attach a mapping of apprenticeship standard KSB elements against Programme Learning Outcomes.

The assessment for this programme is integrated: Yes/No

Mode	Number of hours
Scheduled teaching activities	
*Off the job training	

* Guidance is available from <https://www.gov.uk/government/publications/apprenticeships-off-the-job-training>

Planned content/components and key milestones for mandatory or other qualification achievements:

Apprenticeship element	Start date	End date	Will this component be used towards Off the job training?
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes

PSRB standards/requirements (if applicable)

N/A

- 3. Strategy to Engage Student Learning:** State the Pedagogical principles which underpin your programme and explain how the modes of learning and teaching will lead to engaged student learning.

The pedagogical principles which underpin MSc Cosmetic Science focus on the inclusiveness of the curriculum with respect to the core competences that can support students to transition into the work place. In addition, students will have to adapt to the range of learning strategies used in the course.

The approaches to learning and teaching follow the **Universal Design for Learning (UDL) Principles 1 and 3**, and the approaches to assessment follow **Principle 2**.

Emphasis is given on the application, analysis, synthesis and evaluation of information and knowledge; and on skill-development through a range of blended teaching approaches delivered in a supportive environment where formative feedback informs summative assessment that is varied, employer-led and industry-focussed.

Modes of learning and teaching

The following **teaching & learning** methods will be used:

- **Lectures:** lectures will be delivered by the teaching team and by guest industrial lecturers. Lectures are a didactic teaching method that allows the delivery of information and knowledge on the subject areas. Lectures are an essential part of the delivery strategy and they will be balanced by active teaching methods.

- **Seminars / Workshops:** seminars/workshops will enable students to work on tasks by interacting with each other and with the tutor. These tasks are industrially applicable where students will reflect the body of scientific information and research that underpins the regulation, manufacture and marketing of cosmetic products to make informed decisions and suggestions. These sessions allow for expansion of material delivered in lectures but also encourage independent learning that is required for continuing professional development
- **Problem based learning (PBL) sessions:** PBL allows students to become independent learners and encourages effective teamwork. The 7-step approach will be followed where students allocate a discussion leader and a scribe at each of their PBL sessions/meetings. Scenarios will be adapted to the learning outcomes of the module and will cover all areas of cosmetic formulation, manufacture, quality control and advertising.
- **Laboratory Classes:** laboratory exercises engage students in independently producing, analysing and interpreting results and information. Laboratory classes are essential in Cosmetic Science, which is an applied discipline and requires skills in the formulation, quality control and claims substantiation testing of cosmetic, personal care and fragrance products. Laboratory classes also enable the development of essential industrial skills such as Good Laboratory Practice (GLP), Good Manufacturing Practice (GMP), Health and Safety evaluation and COSHH forms, Standard Operating Procedures (SOPs).
- **Directed self-study:** directed self-study will involve revision of presented material, working through set examples, preparation of laboratory reports, assignments, preparation for workshop presentations, PBL sessions or project work, and open-learning study material. Self-study is essential to ensure that students can explore the depth of information required to understand cosmetic science as a discipline.
- **Advised self-study:** reference to additional reading resources of information will be provided for each module to enable students to read around the module topic and broaden their knowledge encouraging lifelong learning and continuing professional development.

Independent working will be balanced with group tasks. For example:

- Independent working is utilised by the student during the research project work. During the project, each student will be tutor-guided and will be expected to demonstrate reflective, data gathering and analysis skills, while discussing results and their relevance to past and present studies. Students must effectively write and verbally defend their thesis.
- Group tasks include workshops, PBLs and some laboratory sessions.

4. Please describe how you address each of the **Universal Design for Learning (UDL) Principles** as outlined in the Curriculum Design Model [Integrated Curriculum Design Framework](#)

Principle 1: Multiple means of representation

This recognises that students differ in how they perceive and comprehend information and new knowledge. The focus is on:

- teaching methods and techniques
- making connections
- presenting ideas
- modelling enquiry.

This principle acknowledges that there is no single best way to present information or transfer knowledge and that introducing variety in the way in which materials are presented is the key.

The modules of the MSc Cosmetic Science are designed to meet the multiple learning styles of students by presenting information in multiple ways. Examples within these themes of multiple means of representation are:

Teaching methods and techniques:

There is a combination of passive/didactic (eg lectures) and active/reflective (eg interactive workshops, labs, problem based learning) teaching sessions in all modules.

- CSCM01: lectures, seminars, workshops, PBL
- CSCM02: lectures, PBL, seminars, labs
- CSCM03: lectures, seminars
- CSCM04: lectures, workshops, labs
- CSCM05: labs, seminars, lectures

Making connections

The sequence of the modules allows for a thematic coherence on the taught concepts and skills. Modules CSCM01 and CSCM02 are taught alongside, enabling students to make connections between the formulation/manufacturing/labelling practices and the regulations on marketing and claim substantiation testing at each country. These concepts then feed to the CSCM03 module in Term 2 where students are guided through the overall costing of a product; and to the CSCM04 module where students make connections between current skincare/haircare trends and formulation design.

All these 30 credit-each modules then feed to the 60-credit Research Project module (CSCM05) in Term 3 where students are guided to reflect on their knowledge and skills to deduce a topic of current interest in the Cosmetic Industry and to conduct an independent piece of research.

Presenting ideas

There is research-informed teaching in all modules where research-active staff present their research ideas /developments/ findings and industrial guest lecturers present current and emerging developments and practices in the Cosmetic Industry. For example:

- CSCM01: guest lecturer presents the most up-to-date regulations for cosmetic products and claim substantiation practices at each country.
- CSCM02: a series of lectures and interactive workshops on the formulation design of skin products are based on my research expertise as the Programme Leader of MSc Cosmetic Science (Dr Kalliopi Dodou) and are complemented by my research papers in this field, eg:
 - Adejokun D. and **Dodou K.** (2020) Quantitative Sensory Interpretation of Rheological Parameters of a Cream Formulation. *Cosmetics*, 7 (1), 2-13.
 - Rashid F, Albayati M, and **Dodou K.** (2019) Studies on Novel Methods for Formulating Novel Cross-Linked Hydrogel Films of Hyaluronic Acid. *Cosmetics*, 6 (4), 59-78. ISSN 2079-9284
 - Chenevas-Paule C, Wolff HM, Ashton M, Schubert M, **Dodou, K.** (2017) Development of a predictive model for the long term stability assessment of drug-in-adhesive transdermal films using polar pressure sensitive adhesives as carrier/matrix. *Journal of Pharmaceutical Sciences*, 106(5), 1293-1301.
 - Wong R, Ashton M, **Dodou K.** (2015) Effect of crosslinking agent concentration on the properties of unmedicated hydrogels. *Pharmaceutics* 7(3), 305-319.

- Ho KY, **Dodou K.** (2007) Rheological studies on pressure sensitive silicone adhesives and drug-in-adhesive layers as a means to characterise adhesive performance. *International Journal of Pharmaceutics* 333(1-2), 24-33.

Modelling enquiry

Case study workshops, Problem-Based-Learning (PBLs) and lab sessions, model real-case scenarios that a cosmetic scientist would encounter/ enquire/ solve when working in different sectors of the Cosmetic, personal care and fragrance industry. For example:

- CSCM02: PBL sessions that model New Product Development (NPD) exercises and manufacturing troubleshooting in the industry.
- CSCM04: lab sessions on how to create the claims for a given skincare or haircare product using appropriate testing methods and equipment.
- CSCM05: lab-based student-led research enquiry on a current topic.

Principle 2: Multiple means of expression

This principle recognises that students differ in how they express what they know or have learnt. The focus is on:

- multiple means of assessment within a programme
- assessment choice
- scaffolding and supporting students to develop assessment literacy
- focused timely and forward-looking feedback

This principle acknowledges that some students perform better in certain types of assessment than others and that introducing choice or variety is the key to developing a course using UDL principles.

The assessments on the MSc Cosmetic Science are designed to enable students express their knowledge and receive feedback via multiple means. Examples within these themes of multiple means of expression are:

Multiple means of assessment within a programme

The assessment styles and types on the MSc Cosmetic Science are industry-focused and employer-led. *ie* the assessments map the learning outcomes to industrial expectations; those on the skills and knowledge of a Cosmetic Science graduate. By focussing on employability, the MSc Cosmetic Science curriculum fulfils the Tomorrow Makers element of the University's Strategy.

For example:

- CSCM01: Compilation of a written industrial Product Dossier on safety and claims to comply with country-specific requirements.
- CSCM02: Group PowerPoint oral presentation based on a PBL case scenario on a New Product Development Exercise and a manufacturing troubleshooting case scenario.
- CSCM04: Individually submitted critical essay resembling R&D industrial report, on the data analysis and critical discussion of skin product testing lab sessions and correlation with current trends.

Assessment choice

The types of summative assessment are core in each module *ie* there are no optional assessments.

Scaffolding and supporting students to develop assessment literacy

Throughout the MSc modules, students are supported to develop their ability to meet the summative assessment criteria, via:

- “Scaffold” sessions between the allocation of the assessment and the submission date. For example:
 - CSCM01: there are four seminar sessions in preparation to the submission of Assessment 1 (Product Dossier) where students discuss with the tutor progress on the Dossier and get feedback and guidance on whether they are on the right track.
 - CSCM02: PBL sessions on New Product Development. 1st and 2nd sessions involve discussion with the tutor on the topic and the 3rd session is the assessed ppt presentation.
- Formative assessment tasks where the feedback informs and develops literacy towards the summative assessment. For example:
 - CSCM01: three independent workshop sessions on claim substantiation regulations at different countries. Students work in groups and get formative feedback at the end of each session. This formative feedback then feeds to knowledge required for the summative (Product Dossier) assessment.

Focused, timely and forward-looking feedback

All assessments on the MSc Cosmetic Science are accompanied by specific marking criteria and clarity on how marks are allocated on each part of the report.

It is intended that feedback will be detailed, clear, and forward-looking by outlining areas of strength and weakness of the assessed work. According to the University’s assessment policy, feedback should be published to the students no later than four weeks after submission of the work.

Principle 3: Multiple means of engagement

This principle recognises that students engage in learning through different means, and is closely linked to Framework Element 3 (Engaged Learners). The focus is on:

- variety of engagement methods as part of learning
- making reading and materials available in advance of taught sessions
- mixing individual, group and peer learning
- developing interactive elements

The MSc Cosmetic Science modules are designed to enable students engage with the learning activities using various means, taking into consideration the diverse study styles of the students, including those students with Learning Disability memos.

Variety of engagement methods as part of learning

Students can engage with the learning activities in a classroom setting or via online teaching delivery platforms (eg Microsoft Teams). There is an interchange between “Conventional approach” and “Digital Approach” as explained in the University’s “Instructional Design” paper.

Making reading and materials available in advance of taught sessions

Teaching materials (eg lecture slides, lab books) are available on each module’s intranet (CANVAS) for the students to access in advance of the taught session. Each module has a Reading List attached to it on CANVAS (“My Module Resources”) by the programme/module leaders in conjunctions with the Library team.

Mixing individual, group and peer learning

The teaching methods on the MSc Cosmetic Science enable:

- Individual learning via lectures, labs and self-study material.
- Group learning via workshops and PBL tasks.
- Peer learning via attending the PBL, workshop and research project (viva) presentations of their class peers.

Developing interactive elements

There is an interactive element incorporated in every teaching method, whereby students are encouraged to interact with the staff and/or their peers:

- During lecture slots (50 min) the teaching staff are expected to pause every 20 min to set a relevant interactive task. For example:
 - **CSCM02**: on my lectures on Emulsion, Creams & Skin Patch technology, I provide the following interactive elements:
 - Calculation of the HLB of a non-ionic surfactant.
 - Calculation of the HLB of a binary mixture of non-ionic surfactants.
 - Elucidation of the function of the ingredients in a cream and patch formulation.
 - Correlation of the physicochemical properties of an active ingredient with the criteria for systemic passive absorption via the skin.
- Workshops and PBLs are designed to be interactive, enabling student-student & staff-student interaction. For example:
 - **CSCM01**: interactive workshop sessions on claim substantiation regulations at different countries. Students work in groups (student-student interaction) and get formative feedback at the end of each session (tutor-student interaction).
 - **CSCM02**: PBL sessions on an NPD (New Product Development) task. Students work in groups to research, gain knowledge and design a new cosmetic or personal care formulation.
- Labs are interactive practical sessions where students develop skills. For example:
 - **CSCM02**: interactive practical sessions where students gain skills on formulation and quality control testing for material characterisation.
 - **CSCM04**: interactive practical sessions where students gain skills on product testing techniques for claim substantiation.

5. Retention Strategy: Describe plans in relation to student retention

Retention of students on the MSc Cosmetic Science will be enabled via: **i)** offering transparency and familiarisation on the Academic Regulations, **ii)** a robust staff-student communication system, and **iii)** integrating retention monitoring in the assessments.

i) Postgraduate Academic Regulations

This MSc course has a 4 x 30 credits modules and 1 x 60 credits module. Students must pass each module with at least 40% and compensation between modules is not permitted. This information from the latest version of the “Postgraduate Academic Regulations” (see following quoted abstract) and its significance will be detailed in the programme handbook that students receive and will be reinforced at induction:

“The Assessment of Modules

4.2.1 The overall pass mark for each module is 40%. To pass a module a student must also have submitted work for each element of assessment.

4.2.2 Where module assessment comprises two or more contributory elements, a pass will be awarded where a student achieves at least 40% in the overall module mark, providing that the student has submitted assessment in all elements. The student does not need to achieve a mark of 40% in each element.

4.2.3 A requirement may be imposed that students pass (at 40%) each element of assessment within the module to meet PSRB requirements or, where one or more learning outcomes are assessed in only one element of assessment, to ensure that module learning outcomes are met. Such a requirement must be approved on behalf of Academic Board and included in the programme-specific regulations and the module information provided to students.

4.2.4 In-module assessments which are not submitted by the required date will be given a mark of zero and coded as non-submissions unless extenuating circumstances can be demonstrated.

4.2.5 A student who has passed a module at the first attempt may not re-take the module in order to achieve a higher mark, unless the student's performance is judged to have been affected by extenuating circumstances (see section 8).

4.3 The Re-assessment of Modules**4.3.1 Referrals**

(a) When a student fails to achieve the overall pass mark for the module at the first attempt, he/she will have the right to be re-assessed in that module, once only, without attendance, at a time specified by the appropriate Module Assessment Board. Up to 180 credits may be re-assessed in this way.

(b) A student may only be referred in the elements which he/she has failed.

(c) When a student is re-assessed in a module (by coursework and/or by written examination) under 4.3.1(a) above, the marks obtained in the elements of assessment passed at the first attempt shall stand whereas the maximum mark that may be awarded for the referred elements is 40%. The overall mark for the module will be calculated on the basis of the original marks for the elements passed at the first attempt and the capped marks gained in the referred elements.

(d) The form of the reassessment at any stage may vary from the original, at the discretion of the programme studies board. Note that the programme studies board may delegate this authority to the assessment board, but that the students who are to be reassessed must be informed of the style of reassessment to be adopted, including identification of the various assessment components and weighting. Changes to the format of assessment must apply to the whole cohort

4.3.2 Repeat with attendance or by an alternative mode of study

(a) When a student has failed a module at both the first attempt and when subsequently reassessed under 4.3.1, he/she may, at the discretion of the Programme Assessment Board and taking into account the recommendations of the Module Assessment Board, attempt that module again, once only, with attendance or in an alternative mode of study as deemed by the Board to be appropriate. Up to 180 credits may be repeated in this way. Where applicable students may therefore be studying a full-time programme in part-time mode for one year. The standard applicable fee is charged.

(b) In the case of a repeat with attendance or by an alternative mode of study the student will retake the assessment for all the elements of assessment and no marks from previous attempts will be carried forward. The overall mark for the module will be capped at 40%.

(c) A student who fails assessment for the repeat is entitled to one final reassessment as a referral (cf 4.3.1). The marks for the referral(s) and for the module as a whole will be capped at 40%.

(d) *Substitution of an alternative module is not permitted at Masters level.*

4.3.3 *A student has a total number of four attempts at assessment on a module. Should a student transfer route or programme of study and the new route or programme of study contains a module the student has already attempted the total number of attempts at assessment on the module does not increase: i.e. if the student had completed first attempt and referral attempt at a module assessment on their original route or programme of study, they would be permitted to be assessed twice on the module assessment, once on the first occasion of assessment and once (as of right) for a referral. No further attempts are permitted. The subsequent attempt will still be subject to the same capping as would have been the case if the student had completed the further attempts on the original route or programme of study.*

5 Student Progression

5.1 General

5.1.1 *In all programmes the Programme Assessment Board will consider students' marks at the end of the programme of study and will make decisions relating to resits and to the final award. Some programmes may also require a formal progression decision to be made between the various phases of a Master's programme: Certificate, Diploma, Master's. In such cases progression must be agreed by the Programme Assessment Board and a student may not register for modules from the next phase until he/she has progressed.*

5.1.2 *A student may not be referred for re-assessment for a module until all the marks for all the elements of assessment have been received and his/her overall module mark has been confirmed by a Module Assessment Board. A Module Assessment Board may meet after one or more modules have been completed to confirm the marks for those modules and may offer students failing one or more modules an 'in-year' referral on the same basis as in 4.3.1 above.*

5.1.3 *A student offered an in-year referral:*

- *may not be given another referral after the Programme Assessment Board;*
- *may make a request using approved procedures to defer the referral until a later time to manage his/her workload.*

5.1.4 *If a student fails to pass a module at the end of the permitted referrals and repeats and is required to leave the University, he/she will be awarded the exit qualification to which he/she is entitled.*

5.2 Compensation between Modules

5.2.1 *Compensation between modules is not permitted in Postgraduate Certificate or Diploma or Master's programmes."*

ii) Staff-student communication

Each student will be allocated a University e-mail address and will be assigned a personal tutor who is responsible for pastoral care and academic issues. The programme leader is the personal tutor for all MSc Cosmetic Science students.

Communication within modules is available using the University's teaching intranet, CANVAS.

CANVAS is a virtual learning environment that provides an online programme-space & module space to post documents about the programme and teaching materials for each module that can be accessed by the students in advance of the taught sessions. It provides a forum for discussions both between staff and students and between students. CANVAS also enables online teaching sessions (such as CANVAS Conferences lectures and seminars), online submission of coursework (evaluated for plagiarism via Turnitin) and online exams (via Quizzes).

The number and frequency of students accessing CANVAS can be monitored. Tutors can merely monitor or actively contribute to the discussion boards. Students will be given directed learning and

will be signposted to specific websites, journals and books to encourage continuing professional development and maintenance of their personal development files.

The University will add **Microsoft Team** as an online communication and teaching platform between staff and students, starting from academic year 2020/21.

Studies advice will be given by the Programme Leader and Module Leaders as appropriate.

Advice on study skills is given early in the programme. Students are encouraged to liaise with the programme leader and teaching staff closely throughout their period of study. The module leader, in line with the Academic Regulations, will provide remedial support for students who fail module assessments (see point (i) above). The programme leader will also closely monitor attendance at taught sessions, as this is often a good early indicator of problems. Poor attendance will be picked up and tutors asked to contact students for a discussion.

iii) Integrating retention monitoring in the assessments

The MSc Cosmetic Science curriculum actively supports student retention and achievement via:

- The aforementioned “Scaffolding and supporting students to develop assessment literacy” activities which are part of “Principle 2: Multiple means of expression”
- Proactively timetabling meeting sessions with the personal tutor.

6. **Research:** How does Research link to the programme? How does staff research inform the programme? How is the curriculum research active?

There is a strong research culture on all modules of the MSc Cosmetic Science. It is expected that the content and design of this course will shape the students into critical thinkers, problem-solvers who are able to conduct independent research and produce new knowledge and insights on Cosmetic Science during their studies and after graduation. Evidence to the research focus is the Research Project module, which carries 60 credits and constitutes 1/3 of the overall programme’s credits.

How does Research link to the MSc Cosmetic Science? How is the curriculum research active?

Students on the MSc Cosmetic Science become active participant in enquiry, research and knowledge utilisation and are motivated, via well-designed and relevant assessments, to produce new knowledge and understanding through enquiry, critique and synthesis. All elements of assessment in every module of the MSc Cosmetic Science are research-driven.

For example:

- CSCM01: enquiry, critique and synthesis of a Product Dossier.
- CSCM02: New Product Development (NPD) task requiring market analysis and knowledge utilisation towards the theoretical synthesis of a new product.
- CSCM03: synthesis of a business plan for a new product. This is follow-up from the NPD task on CSCM02.
- CSCM04: Critical essay based on the data analysis and critical discussion of skin product testing labs and correlation to current trends.
- CSCM05: Research project.

How does staff research inform the MSc Cosmetic Science?

MSc Cosmetic Science is a STEM postgraduate course that, similarly to the BSc Cosmetic Science, has been derived from the research specialisation and industrial networking of the programme leader (Dr Kalliopi Dodou). There is therefore research-informed teaching in all modules where research-active staff present their research ideas /developments/ findings, and industrial guest

lecturers present current and emerging developments and practices in the Cosmetic Industry (see also the aforementioned “Principle 1: Multiple means of representation, Presenting ideas”). For example:

- CSCM02: a series of lectures and interactive workshops on the formulation design of skin products are based on my research expertise as the Programme Leader of MSc Cosmetic Science (Dr Kalliopi Dodou) and are complemented by my research papers in this field, eg:
 - Adejokun D. and **Dodou K.** (2020) Quantitative Sensory Interpretation of Rheological Parameters of a Cream Formulation. *Cosmetics*, 7 (1), 2-13.
 - Rashid F, Albayati M, and **Dodou K.** (2019) Studies on Novel Methods for Formulating Novel Cross-Linked Hydrogel Films of Hyaluronic Acid. *Cosmetics*, 6 (4), 59-78.
 - Chenevas-Paule C, Wolff HM, Ashton M, Schubert M, **Dodou, K.** (2017) Development of a predictive model for the long term stability assessment of drug-in-adhesive transdermal films using polar pressure sensitive adhesives as carrier/matrix. *Journal of Pharmaceutical Sciences*, 106 (5), 1293-1301.
 - Wong R, Ashton M, **Dodou K.** (2015) Effect of crosslinking agent concentration on the properties of unmedicated hydrogels. *Pharmaceutics* 7 (3), 305-319.
 - Ho KY, **Dodou K.** (2007) Rheological studies on pressure sensitive silicone adhesives and drug-in-adhesive layers as a means to characterise adhesive performance. *International Journal of Pharmaceutics* 333 (1-2), 24-33.
- CSCM05: students have the opportunity to become active members of my research group (Pharmaceutical and Cosmetic Sciences) and work alongside my PhD students on an ongoing research project or be supervised by my PhD students on a new research task on a current Cosmetic Science topic, under my guidance and direction. The research topics on haircare products are also supported (co-supervised) by my Visiting Professor on Cosmetic Science who has expertise on that topic.

7. Student Support arrangements (especially those that are specific to the programme proposed):

Link provided to [student handbook](#) which details support available to students
 Include reference to workplace support for Apprenticeship Programmes

Students on the MSc Cosmetic Science benefit from the vast range of the Student Support services that the University of Sunderland offers. All services are outlined on the Student Handbook <https://my.sunderland.ac.uk/display/SH/Student+handbook>

Similarly to the BSc Cosmetic Science, I intend to integrate also into the MSc Cosmetic Science the following student support services:

- **Careers and Employability:** I work closely with the Sunderland Futures team to support my Cosmetic Science students with CV writing and interview skills when they apply for jobs.
- **Disability Support:** this team provides disability memos and advice for any students that have been diagnosed with a disability that can interfere with their studies, eg. attention deficit, dyslexia, eye-sight problems etc.
- **Financial Guidance:** this also includes the University’s own budgeting app for students, called PANDA.
- **Gateway Enquiries** via the Compass app, which students can access online for all types of enquiries.
- **International Student Support (ISS):** The ISS team advises and supports international students on visa applications and visa related matters.
- **Progression Team:** enables student retention by referring them to other services as appropriate.

- **Student Wellbeing:** this multidisciplinary team provides professional support and expertise to students in relation to their emotional, psychological, physical and spiritual health needs. There is also a suite of online self-help programmes to support their emotional and mental health, which is available 24/7 and is free to access: www.sunderland.ac.uk/silvercloud

8. Student representation: Where the proposed programme is intended for Work-based learning/apprenticeships or Distance/blended learning please describe how you will manage Staff Student Liaison Committees

Link provided to [Student Representation and Feedback Policy](#)

What other mechanisms will you use to capture Student voice?

Students on the MSc Cosmetic Science will be able to voice their feedback and have a presence and identity within the University via the following means:

- **Course representatives:** 2 course reps can be elected for MSc courses
- **Cosmetic Science Student Society (CSS):** The CSS is part of the University of Sunderland Student's Union (USSU) and it was created by the current BSc Cosmetic Science students in October 2019. The MSc students will be encouraged to join and be an integral part of the CS student society.
- **Student-Staff Liaison Committees (SSLC):** The role of this committee is to provide a formal communication and discussion forum within the Faculty for students to air concerns about their course. The student representatives are trained by the USSU on their roles and how to collect reliable and meaningful feedback from the overall student body in their course. The SSLC has been running successfully for the BSc Cosmetic Science and it is envisaged that the MSc student reps will add to that. Student feedback is discussed and minuted at the SSLC meetings alongside a list of action points for the programme leader/module leaders. The completion of the action points is communicated to the student reps who can then feedback this to the student body.

9. Stakeholder engagement

Please summarise who has been involved in the development of the programme and how – eg students, employers, PSRB, other appropriate stakeholders, including where required service users, patients, carers or the public

I proposed the MSc Cosmetic Science in April 2017 in response to feedback by current students, industrial partners and several of the University's global recruitment offices; it was approved in October 2018 (see "AQH-B2-2 Outline Programme Approval MSc Cosmetic Science")

On the BSc Cosmetic Science programme I utilise a number of specialist speakers drawn from a cross-section of the Cosmetics industry and these contacts have highlighted a need for appropriately qualified graduates at both graduate and postgraduate levels.

As with the development of BSc Cosmetic Science, the MSc is being designed in consultation with a few of my stakeholder industrial partners to ensure a relevant and contemporary curriculum, enabling students to develop the academic knowledge and practical skills required by companies involved in the regulation, manufacture, safety, marketing and distribution of cosmetic products. The specialist input currently used in the BSc Cosmetic Science will be used to support delivery but will also ensure relevance and currency of the offer to market requirements.

- 10. Employability:** The programme specification asks you to summarise how the programme will contribute to the development of Graduate attributes. If you wish to provide further information on how the programme promotes employability please add this.

The University of Sunderland aspires that graduates have the following three transferrable attributes: Professional, Adaptable, and Engaged.

Throughout the MSc Cosmetic Science programme students develop specific skills and the transferrable attributes that will make them employable by the cosmetic, personal care and fragrance industries. The development of these skills and attributes has been embedded in the learning outcomes and content (see module descriptors), teaching methods and assessment types of the MSc Cosmetic Science modules (see above **Principle 1: Multiple means of representation, Principle 2: Multiple means of expression, and Principle 3: Multiple means of engagement**)

Employment options within the Cosmetic industry (<http://www.scs.org.uk>) include:

- Research
- Perfumery
- Product, Process and Packaging Development
- Manufacturing
- Quality Control and Assurance
- Product Evaluation and Safety Testing
- Microbiology
- Sales & Marketing
- Purchasing

Evidence to my ability to design an effective curriculum, is the employability record of my BSc Cosmetic Science graduates. I envisage that the MSc Cosmetic Science graduates would be equally employable. Employability examples and success stories from my BSc Cosmetic Science students:

- Paige Fearn got a part-time job while on her 2nd year and 3rd year of studies at Bria Organics (Newcastle, UK) where she developed several new products that the company has now launched on the market:
 - <https://sunderlandbusinesspartnership.co.uk/sunderland-cosmetic-science-student-on-the-right-career-paige/>
 - <https://www.sunderland.ac.uk/study/student-case-studies/pharmacy-pharmaceutical-and-cosmetic-sciences/paige-fearn/>
- Rifah Tasnim helped a local Cosmetics company (West Barn Co, Durham UK) transform and grow their business:
 - <https://theworldnews.net/gb-news/how-a-sunderland-student-helped-a-durham-brand-become-a-favourite-of-beyonce-and-little-mix>
 - <https://www.chroniclelive.co.uk/news/north-east-news/how-sunderland-student-helped-durham-17165777>

Appendix 1: Framework for Higher Education Qualifications Mapping to Programme & Module Learning Outcomes

Level 7

Framework for Higher Education Qualifications Qualification Descriptors	Programme Learning Outcomes	Modules which demonstrate the learning outcomes through assessment					
Level 7: Masters degrees are awarded to students who have demonstrated:	Level 7: Master’s Degree	CSCM01	CSCM02	CSCM03	CSCM04	CSCM05	
<p>A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice</p>	<ul style="list-style-type: none"> • Display mastery of the legal framework and regulatory bodies for advertising cosmetic products and perfumes and how these regulations differ among countries. • Display mastery of the formulation principles for skincare and haircare cosmetic and personal care products, decorative products and fragrances. • Display mastery in the physiology of healthy and diseased skin; modes of skin aging; the interplay between genetic, hormonal and environmental factors; theory of skin testing methods; latest formulation trends eg microbiome, stem cells etc. • Display critical awareness of the advances at the forefront of a specific area of the cosmetic science discipline including understanding of 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

	specialised areas of cosmetic science.						
A comprehensive understanding of techniques applicable to their own research or advanced scholarship	<ul style="list-style-type: none"> • Demonstrate expertise in the techniques involved in Quality Control testing, material characterization and sensorial evaluation of cosmetic formulations. • Demonstrate expertise in the calculation of product costs (profit, loss margin etc) during a Product Development Exercise. • Demonstrate expertise in the application of appropriate methods (objective and subjective) to evaluate skin properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage. • Display mastery of successfully conducting and writing up a piece of independent research by designing and applying appropriate research methods. 		☑	☑	☑	☑	
Originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline	<ul style="list-style-type: none"> • Demonstrate expertise and initiative to devise a process for the design of a cosmetic product taking into consideration specific regulatory requirements and dilemmas (e.g. organic, preservative-free, borderline products) • Display the ability to make informed decisions on New Product 	☑	☑	☑	☑	☑	

	<p>Development (NPD) tasks, from raw material selection to critical evaluation of formulation scale-up and manufacturing processes, packaging and marketing.</p> <ul style="list-style-type: none"> • Demonstrate accountability in planning and executing the development of a cosmetic product. • Demonstrate expertise in the application of appropriate methods (objective and subjective) to evaluate hair properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage. • Display mastery of successfully conducting and writing up a piece of independent research by designing and applying appropriate research methods. 						
Conceptual understanding that enables the student:							
<p>- to evaluate critically current research and advanced scholarship in the discipline</p>	<ul style="list-style-type: none"> • Display mastery of the updated regulations in relation to animal studies and alternative testing methods. • Display mastery in the physiology of healthy and diseased skin; modes of skin aging; the interplay between genetic, hormonal and environmental factors; theory of skin testing methods; latest formulation trends eg microbiome, stem cells etc 	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

	<ul style="list-style-type: none"> • Display mastery in the structure of healthy and damaged hair; ethnic differences in hair structure; modes of hair damage; formulation approaches and trends to manage damaged hair; hair product testing techniques and methods. • Display critical awareness of the advances at the forefront of a specific area of the cosmetic science discipline including understanding of specialised areas of cosmetic science. 						
<p>- to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.</p>	<ul style="list-style-type: none"> • Demonstrate expertise on how advertising claims are supported by the appropriate claim substantiation testing of products based on the statistical analysis of consumer and scientific data. • Display mastery of the manufacturing principles of cosmetics, including lab-scale and industrial-scale manufacture, types of equipment and critical manufacturing parameters, using appropriate examples. • Demonstrate expertise in the techniques involved in Quality Control testing, material characterization and sensorial evaluation of cosmetic formulations. • Demonstrate expertise in the application of appropriate methods 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

	<p>(objective and subjective) to evaluate skin properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage.</p> <ul style="list-style-type: none"> • Demonstrate expertise in the application of appropriate methods (objective and subjective) to evaluate hair properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage. • Display mastery of successfully conducting and writing up a piece of independent research by designing and applying appropriate research methods. 						
Typically, holders of the qualification will be able to:							
<p>Deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences</p>	<ul style="list-style-type: none"> • Demonstrate expertise on how advertising claims are supported by the appropriate claim substantiation testing of products based on the statistical analysis of consumer and scientific data • Display mastery of the business framework in the cosmetic industry, the importance of time management, multitasking and the ability to communicate information accurately to both specialist and non-specialist audiences. 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

	<ul style="list-style-type: none"> • Demonstrate expertise in the debate and defence of the final research output in a viva voce and in a poster format to specialised and non-specialised audiences 						
Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level	<ul style="list-style-type: none"> • Demonstrate expertise and initiative to devise a process for the design of a cosmetic product taking into consideration specific regulatory requirements and dilemmas (e.g. organic, preservative-free, borderline products) • Display the ability to make informed decisions on New Product Development (NPD) tasks, from raw material selection to critical evaluation of formulation scale-up and manufacturing processes, packaging and marketing. • Demonstrate accountability in planning and executing the development of a cosmetic product. • Display mastery of successfully conducting and writing up a piece of independent research by designing and applying appropriate research methods. 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Continue to advance their knowledge and understanding, and to develop new skills to a high level	All PLOs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
And holder will have: the qualities and transferable skills necessary for employment requiring:							

<p>- the exercise of initiative and personal responsibility</p>	<ul style="list-style-type: none"> • Demonstrate expertise and initiative to devise a process for the design of a cosmetic product taking into consideration specific regulatory requirements and dilemmas (e.g. organic, preservative-free, borderline products) • Display the ability to make informed decisions on New Product Development (NPD) tasks, from raw material selection to critical evaluation of formulation scale-up and manufacturing processes, packaging and marketing. • Display mastery of the business framework in the cosmetic industry, the importance of time management, multitasking and the ability to communicate information accurately to both specialist and non-specialist audiences. • Display mastery of successfully conducting and writing up a piece of independent research by designing and applying appropriate research methods. 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
<p>- decision-making in complex and unpredictable situations</p>	<ul style="list-style-type: none"> • Demonstrate expertise and initiative to devise a process for the design of a cosmetic product taking into consideration specific regulatory requirements and dilemmas (e.g. organic, preservative-free, borderline products) 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

	<ul style="list-style-type: none"> • Display the ability to make informed decisions on New Product Development (NPD) tasks, from raw material selection to critical evaluation of formulation scale-up and manufacturing processes, packaging and marketing. • Demonstrate accountability in planning and executing the development of a cosmetic product. 						
<p>- the independent learning ability required for continuing professional development.</p>	<ul style="list-style-type: none"> • Display mastery of the legal framework and regulatory bodies for advertising cosmetic products and perfumes and how these regulations differ among countries • Display mastery of the updated regulations in relation to animal studies and alternative testing methods. • Display mastery in the physiology of healthy and diseased skin; modes of skin aging; the interplay between genetic, hormonal and environmental factors; theory of skin testing methods; latest formulation trends eg microbiome, stem cells etc • Display mastery in the structure of healthy and damaged hair; ethnic differences in hair structure; modes of hair damage; formulation approaches and trends to manage damaged hair; hair product testing techniques and methods. 	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

	<ul style="list-style-type: none">• Display critical awareness of the advances at the forefront of a specific area of the cosmetic science discipline including understanding of specialised areas of cosmetic science							
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