

Quality Assurance and Enhancement Committee**Programmes Committee Report for recommendations made by members and via Chair's Actions from Tuesday 12th May 2020 onwards**

Submitted by: Men-Yeut Wong, Secretary, Programmes Committee

The Quality Assurance and Enhancement Committee is invited to consider recommendations from members of the Programmes Committee and via Chair's Action from 12th May 2020 onwards for approval:

1. Curriculum Review

The Faculty of Engineering presented the following in response to recommendations made during the 2018-29 Undergraduate Curriculum Review process.

1.1 Undergraduate Aeronautical Engineering

During the Undergraduate Aeronautical Curriculum Review process, the Programmes Committee noted that the Programme Learning Outcomes presented are common across the programmes with little differentiation. The Committee advised that the Department consider what makes each of the individual programmes unique, if the programme learning outcomes could be reviewed to include an additional unique learning outcome for each programme and if each of the programme overviews could be reviewed to include a unique selling point. This would also be an opportunity to promote the benefits of choosing the specialism in Spacecraft Engineering, Year Abroad or Year in Industry; It is noted that this is a reasonable undertaking, which should be supported by Educational Development Unit staff. Following discussion with the Faculty Education Team and Education Office it is suggested that this work is distributed over the 2019-20 academic year, working towards a deadline of 31 March 2020.

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, and the Education Office in Autumn 2019, and it was suggested that the department could add an additional learning outcome for the "with Spacecraft Engineering", "with a Year Abroad" and "with a Year in Industry" programmes to ensure that the programmes were distinct.

MEng Aeronautics and Spacecraft Engineering

Having reflected on the Programmes Committee feedback, the Department agreed to update the programme level learning outcomes to explicitly reference "aerospace engineering" rather than "aeronautical engineering" to distinguish between the programmes.

Updates to Aeronautical Engineering with a Year Abroad (4yr and 5yr programmes)

The Department confirmed that no additional updates are required. Both programmes specifications contain unique paragraphs relating specifically to the year abroad element of each programme, and the programme level learning outcome 12 in each is unique to the year abroad programmes.

MEng Aeronautical Engineering with a Year in Industry

The department has confirmed that no additional updates are required. The programme specification already contains a unique paragraph relating specifically to the year in industry element of the programme, and the programme level learning outcome 12 in is unique to the year in industry programme.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

1.2 Undergraduate Bioengineering

During the Undergraduate Bioengineering Curriculum Review process, the Programmes Committee noted that the programme intended learning outcomes had been formatted to align to the programme's Professional Bodies, but members were unsure as to which outcomes were set at a Master's FHEQ Level; the Department are recommended to separate the Master's level outcomes so that they are made more explicit to students. The programme team should also consider whether the learning outcomes should build in complexity and if they are reflective of what a student would achieve upon completing a MEng in Bioengineering; It is noted that this is a reasonable undertaking, which should be supported by Educational Development Unit staff. Following discussion with the Faculty Education Team and Education Office it is suggested that this work is distributed over the 2019-20 academic year year, working towards a deadline of 31 March 2020.

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, and the Education Office in Autumn 2019. It was noted that the FHEQ level of the programme level learning outcomes was appropriate and the headings 'Knowledge and Understanding', 'Intellectual Abilities' and 'Practical and Transferrable Skills' could be retained however the presentation could be improved so that students could see how the learning outcomes mapped across the different exit awards. This has now been completed. Students can now clearly cross reference individual learning outcomes across the exit awards. The department is content that the learning outcomes build in complexity.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

1.3 Undergraduate Computing

During the Undergraduate Computing Curriculum Review process, the Programmes Committee recommended that the Department review and refine the learning outcomes for all programmes and modules to ensure that they are described at the correct FHEQ level and that progression from year to year is evident within the learning outcomes, especially those at FHEQ level 7. The Committee noted that this is a significant undertaking, which should be supported by the Educational Development Unit staff. Following discussion with the Faculty Education Team and Education Office it is suggested that this work is distributed over the next two years (from the 2019-20 academic year onwards), working to the annual major change deadline and any future deadlines for Curriculum Review of postgraduate programmes.

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, and the Education Office in Autumn 2019. It was recommended that changes suggested for the Joint Maths and Computing programme level learning outcomes which align with Computing should be updated concurrently (this has been address separately).

Regarding the feedback at module level, it was confirmed that the module level learning outcomes were not discussed at Programmes Committee. The department had addressed, as part of its submission, the feedback from its Curriculum Review panel. The department is aiming to undertake postgraduate curriculum review for 2022-23 entry, and given the large proportion of shared FHEQ Level 7 modules at UG and PGT level, any further revisions to these module level learning outcomes and (and programme level learning outcomes) will be considered as part of this process.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

1.4 Undergraduate Joint Maths and Computing

During the Undergraduate Joint Maths and Computing Curriculum Review process, the Programmes Committee recommended that the programme team review how the programme learning outcomes

map to the assessment strategy and how students will be able to demonstrate that they have achieved each outcome upon completion of each of the years, in particular:

- 1. Explain the basic operation of a computer.- Consider how would 'basic' be quantified; This has now been revised to "Explain the internal architecture of a simple computer".
- 8. Explain the social, ethical and professional principles associated with computer-based technology and act in a manner that respects those principles.- Consider how this would be assessed; The phrase "and act in a manner that respects those principles" has been removed.
- 15. Adhere to relevant laws that impact on the practice of computing - Consider how this would be assessed; This has now been revised to "Explain the relevant laws that impact on the practice of computing".
- 20. Demonstrate effective application of Computing in scientific, engineering and industrial domains, as an individual. – Consider if this would be better rephrased as 'Individually demonstrate.....'; This has now been rephrased as suggested.

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, and the Education Office in Autumn 2019, and it was agreed that the above programme level learning outcomes and would be reviewed for both JMC and Computing. The changes made have been recorded above. For consistency, these changes have also been made to the learning outcomes in the Computing programme specifications.

At the meeting it was requested that the assessment strategy be updated to bring it in line with the Computing programme specifications. This has been completed and was included in the department's response.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

1.5 **Undergraduate Earth Science and Engineering**

During the Undergraduate Earth Science and Engineering Curriculum Review process, the Programmes Committee recommended that the Department review the structuring of the learning outcomes for all the programmes to avoid repeating the learning outcomes of the intermediate awards. The outcomes could be staged so that the intermediate learning outcomes are listed first then the additional outcomes for the higher awards. The Committee noted that this is a reasonable undertaking, which should be supported by the Educational Development Unit staff. Following discussion with the Faculty Education Team and Education Office it is suggested that this work is distributed over the 2019-20 academic year, working towards a deadline of end of March 2020.

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, and the Education Office in Autumn 2019. It was agreed that the presentation of the programme level learning outcomes could be improved so that students could see how the learning outcomes mapped across the different exit awards. It was noted that the department could choose to present the learning outcomes from highest award to lowest, which would mean that some repetition would remain. This has now been completed. Students can now clearly cross reference individual learning outcomes across the exit awards.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

1.6 **Undergraduate Materials**

During the Undergraduate Materials Curriculum Review process, the Programmes Committee noted that the evaluation section of the Curriculum Review Proposal Form there would be a student panel comprised of five students evaluating the changes made to the curriculum, it was queried whether

the evaluation would be too burdensome for five students and if this would be the correct way to evaluate the changes. The Department were advised to seek further guidance from the Educational Development Unit who would be able advise around the evaluation process;

Discussions took place between the Associate Head of Department for Education, Materials and a Senior Teaching Fellow, EDU, the following approach has been devised:

Evaluation method: Student panel per module to gain in-depth insights into the quality of delivery and their content.

- There will be a student panel per module which include five students evaluating the changes made to the curriculum/each module.
- Student panel selection: To ensure inclusivity, this opportunity to participate in a panel group will be open to all the students taking those modules. Students will be advised to express their interest by a given deadline. If we get more than we need, we can then look into how to best group them in a way that enhances its representativeness. We might end up with more than one focus group for the same module if more students would like to participate. This would be fine as we get to compare across these discussions.
- The student recruitment process for these panels will be made transparent in terms of what will be involved if students are interested. Students will be expected to attend a single one-hour meeting with an academic moderator to assess the module content and delivery. The students will then have an opportunity to comment on any proposed changes to the module stemming from a meeting between the academic moderator and the module delivery team. To address the potential 'over-burdensome' issue, we will monitor the recruitment process to avoid the same student participating in all the panel groups.
- The summary from the student panel can be intersected with other student feedback data such as SOLE and report from student representatives across year groups to get a more holistic picture; each data set can complement each other.
- Timing for conducting the student panel discussion is important and will be taken into consideration (e.g. avoiding assessment period).
- For the initial student recruitment, we will try without incentives (e.g. free lunch) as we reckon it would be difficult, given the current circumstances but if the uptake is low, we might consider other ways to incentivize students (e.g. purchasing a coffee machine in their common room, Amazon e-voucher, etc).

The Programmes Committee also referenced the following:

- that the Curriculum Review Reference Panel had noted that the Department should review the use of 'demonstrate understanding' within the Programme Learning Outcomes; although the Department had reflected upon this, the Committee were unsure as to how 'demonstrate understanding' and 'reflect' would be measured;
- that the Department to consider how the learning outcomes are presented and whether they should be structured in a staged format starting with the intermediate awards first then progressing with to the full degree award with 'in addition to the above learning outcomes, upon successful completion of the MEng award, you will be able to:.....';
- that the Department review how the learning outcome 'Consider the legal, social, ethical and professional principles associated with Materials Science and Engineering and act in a manner that respects those principles' the Committee thought the Department could consider rephrasing this learning outcome to 'Adhere to the legal, social, ethical and professional principles.....' and consider how this would be assessed;

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, the Education Office in Autumn 2019. It was agreed that the presentation of the programme level learning outcomes could be improved so that students could see how the learning outcomes mapped across the different exit awards. During

the discussion it was also agreed that the use of 'reflect' did not need to be updated. The department has reviewed the use of 'demonstrate understanding' and will update this to 'Understand' (FHEQ level 4 learning outcome). The department has considered rephrasing 'Consider' with 'Adhere' and has reviewed the EDU Teaching Toolkit guidance online and has chosen to retain the use of 'Consider'.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

1.6 Undergraduate Mechanical Engineering

During the Undergraduate Mechanical Engineering Curriculum Review process, the Programmes Committee recommended that the Department review and refine the learning outcomes for all the programmes to ensure that they are described at the correct FHEQ level and that progression from year to year is evident within the learning outcomes, especially those at FHEQ level 7. Furthermore, the Committee recommended that the learning outcomes are split into four different years. The Committee noted that this is a reasonable undertaking, which should be supported by the Educational Development Unit staff. Following discussion with the Faculty Education Team and Education Office it is suggested that this work is distributed over the 2019-20 academic year, working towards a deadline of end of April 2020.

The Faculty Education Team discussed the Programmes Committee feedback regarding the learning outcomes in detail with the Chair of Programme and colleagues in Registry Quality Assurance, the Educational Development Unit, the Education Office in Autumn 2019. It was recommended that the presentation of the learning outcomes should be consistent across all programmes, and that the Department could consider structuring the learning outcomes by year in a similar way to the Department of Computing.

The learning outcomes were reviewed and revised in light of this feedback, and an updated draft was shared with the Faculty of Engineering Education Committee EDU representative which led to some further refinements.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

2. Major Modifications to Existing Programmes

Faculty of Engineering

2.1 Undergraduate Mechanical Engineering

The Programmes Committee considered a proposal from the Department of Mechanical Engineering to make changes to intended learning outcomes, the module content and brief description of the above module with effect from October 2020.

Minor changes to the wording of learning outcomes to be more aligned with modern pedagogical practice:

On completion of this module students should be able to:

1. Select appropriate dimensionless groups and solve scaling problems
2. Select an equation of motion, such as Euler, isentropic flow, Cauchy, Navier-Stokes, as appropriate to solve a problem
3. Simplify and/or approximate the equations of motion to aid solution
4. Apply appropriate boundary conditions and solve the equations
5. Evaluate the forces exerted by a fluid on its boundaries

The change to the module content is to account for overlap in ME2/ME3 fluids. The Department are retaining the introduction to turbulence, whilst emphasizing an engineering approach and conceptual

ideas, rather than deriving equations (RANS). The Department will also be able to dedicate more time to deeper understanding of the remainder of the module.

Changes to the Brief Description section:

The ME2 Fluid Mechanics module aims to continue the development of key aspects of engineering fluid mechanics.

Topics include dimensional analysis, the mass-conservation and momentum-balance principles applied to a fluid particle, the differential form of the governing equations (Navier-Stokes), compressible flows (speed of sound, Mach cone, isentropic-flow relations and converging-diverging nozzles). incompressible flows with exact (Couette-Poiseuille flows) and approximate (boundary layers, Blasius solution, lubrication) solutions, and an introduction to turbulence.

Changes to the Module Content:

Dimensional analysis. Notion of a fluid particle (continuum model assumption). Kinematics of a fluid particle. The material derivative. The Navier-Stokes equations. Exact solutions (laminar Couette-Poiseuille flows). Approximate solutions (boundary layers, Blasius solution, lubrication). Introduction to turbulence (origin, time-averaged governing equations, eddy viscosity) with application to channel/pipe flows. Compressible flows: speed of sound, Mach cone, isentropic-flow relations, converging-diverging nozzles.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

2.2 **MSc Composites**

The Programmes Committee considered a proposal from the Department of Aeronautics to make changes to the assessment method of module AERO97050 Composites Laboratories, by merging 5 lab reports into one coherent journal article style scientific report; and to remove the log books assessment, with effect from October 2020.

Instead of 8 different laboratory reports, the students submit only 4 reports:

- 1 report for Flexure, Tension, Compression, Shear and Fracture
- 1 for Channel Warping
- 1 for DSC/DMA
- 1 for NDE

It was agreed that there was a strong academic rationale for the change and that the production of the journal-style paper strengthens the link between teaching and research. It has been recommended that the department to think about including formative assessment on the log books just to make sure that the students do get feedback and can improve.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

2.3 **MSc Control Systems**

The Programmes Committee considered a proposal from the Department of Electrical and Electronic Engineering to change the above programme title to “MSc in Control and Optimisation” with effect from October 2021.

This proposal is complemented by the introduction of two new optimisation related modules, and reorganisation of the existing modules, such as Topics in Control around optimisation related subjects.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020 (for the purposes of marketing and student recruitment, this change would be applied to the October 2021 cohort).

2.4 **MSc Petroleum Geoscience**

The Programmes Committee considered a proposal from the Department of Earth Science and Engineering to make changes to modules within the above programme with effect from October 2020.

EART97025 Reservoir Characterisation Fieldtrip & Group Project
EART97022 Petroleum Basin Analysis
EART97023 Applied Sedimentology

To re-schedule several modules, so that all fieldwork and team project components of the MSc course take place in Spring term (January – March 2021). The re-scheduled timing would be as follows:

- Autumn term - Petroleum Basin Analysis; Applied Sedimentology
- Spring term - Reservoir Characterisation Fieldtrip & Group Project

EART97027 Synthesis Fieldwork

- To change the name of the core module “Synthesis Fieldwork” to “Synthesis Fieldwork and Methods”.
- The learning outcomes of the module will also be modified to reflect this change – specifically to add that students will appreciate the application of data science and machine learning to geological data and problems upon completion of the module:
 - make and integrate structural, sedimentological and stratigraphic observations in the field;
 - appreciate how these field observations are applied to the interpretation of petroleum systems and their component parts in subsurface data;
 - (NEW) appreciate the application of data science and machine learning to geological data and problems.
 - No changes to learning objectives, number study hours or credit allocation is proposed.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

2.5 **Postgraduate Civil & Environmental Engineering**

The Programmes Committee considered a proposal from the Department of Civil and Environmental Engineering to make changes to modules within the postgraduate taught programmes with effect from October 2020.

CIVE97129 - Freight Transport

(Elective spring term module for H2UR MSc Transport and H2B3 MSc Transport & Business Management)

Changes to the learning outcomes:

From:

- students will possess a good understanding of freight transport, know fundamental concepts and principles in logistics, and acquire basic quantitative skills in freight planning.

To:

- Understand the fundamentals of freight transport theory
- Apply the latest quantitative modelling approach in logistics and freight distribution planning
- Apply know fundamental concepts and principles of logistics
- Demonstrate basic quantitative skills in freight planning.

CIVE97097 - Structural Dynamics

(Elective autumn term module for H2A2 MSc Concrete Structures, H2A3 MSc Earthquake Engineering, H2A1 MSc General Structural Engineering and H2U5 MSc Structural Steel Design)

Changes to the learning outcomes:
Remove the below learning outcome:

- Appreciate the phenomena involved in the loss of linearity in the dynamic response of simple structures as well as the engineering approaches employed to model them appreciating their limitations.”

Replace with:

- Appreciate the inherent conflicts for the simultaneous minimization of all response variables involved in vibration absorption.

CIVE97025/6 – Innovation in Civil Engineering

(Core module for H2A8 MSc Environmental Engineering & Business Management, H2B1 MSc Hydrology & Business Management, H2A4 MSc Soil Mechanics & Business Management, H2B3 MSc Transport & Business Management)

Removal of reference made to “BIM” from the Learning Outcomes and amendment to the weightings for assessment elements.

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval with the recommendation that the learning outcomes of the modules above are reviewed during the PGT Curriculum Review process to ensure that they align to a L7 FHEQ standard.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

2.6 **MSc Advanced Materials for Sustainable Infrastructure**

A proposal from the Department of Civil and Environmental Engineering to make changes to the above programme with effect from October 2020. The programme ran for the first time during the last academic year and so in review of the first delivery, the programme team would now like to propose the following changes:

Removal of the following core modules

CIVE97156 Advanced Concrete Materials

CIVE97155 Stability and Failure of Composite Structures

Addition of the following core modules:

NEW Cementitious Materials

CIVE97150 Polymers and Polymer Composites

Change of Core module title:

From CIVE97144 ‘Steel’ to: CIVE97144 ‘Metals’

Core Module Learning Outcome changes to the following modules:

CIVE97093 Concrete Materials

From:

- Understand how the constituents and mix proportion of concrete influence its early age properties, mechanical properties, volume changes and durability, via an appreciation of their influence on concrete microstructure.
- Be able to design and proportion concrete mixtures to a specified performance.
- Be familiar with common problems affecting concrete in construction and their prevention.
- Appreciate the issues concerning sustainability of cements and concretes.

To:

- Understand how the constituents and mix proportion of concrete influence its early age properties, mechanical properties, volume changes and durability, via an assessment of their influence on concrete microstructure.
- Specify, design and calculate concrete mix proportions to the required performance.
- Classify, explain and evaluate common problems affecting concrete in construction and recommend their mitigating strategies.
- Explain issues concerning sustainability of cements and concretes.
- Evaluate advanced concrete materials and explain their underpinning science.

CIVE97153 Sustainable Development

From:

- Understand and be able to apply the principles of sustainability to a range of issues relating to the built environment.
- Understand the legislative frameworks and commercial relevance of sustainability.
- Be able to assess the impact of the built environment and infrastructure materials on resource extraction, energy demand and carbon emissions.
- Be able to carry out a life cycle assessment of infrastructure elements.

To:

- Describe what industrial ecology is and its relevance to sustainability, engineering, construction, infrastructure, and the built environment
- Explain important issues, concepts, and methods in industrial ecology and sustainable engineering
- Apply life cycle assessment and material flow analysis to product and material systems
- Analyse and evaluate life cycle assessment and material flow analysis results
- Create recommendations for relevant audiences of life cycle assessment and material flow analysis studies, based upon their results, and involving trade-offs

CIVE97152 Characterisation of Materials

From:

- Have a clear understanding of the principles, and a knowledge of the capabilities and limitations, of mechanical testing (tensile, compressive, creep, fatigue, toughness, hardness, modulus and acoustic emission), 2D and 3D microscopy (optical, electron and X-ray microscopy, including image analysis), X-ray composition analysis methods (X-ray diffraction, X-ray fluorescence analysis and SEM-EDX), thermal analysis (DTA, TGA and DCS), characterization of particles, surfaces and pores (laser diffraction granulometry, gas and vapour sorption analysis, zeta potential, contact angle, surface roughness and mercury intrusion porosimetry) and FTIR and Raman spectroscopy.
- Be able to recommend appropriate methods for particular problems and interpret the data obtained.

To:

- Understand the principles and capabilities of a range of advanced characterisation techniques
- Understand the limitations and complementarity of these techniques
- Recommend appropriate techniques for specific applications

CIVE97147 Numerical Modelling of Materials

From:

- Understand the principles, applications and limitations of numerical models as applied to materials.
- Be able to devise a physical model of an aspect of material behaviour.
- Have knowledge of finite difference, finite element and discrete element models and Monte Carlo and molecular dynamics simulations.

To:

- Understand the principles, applications and limitations of numerical models as applied to infrastructure materials.

- Appreciate the characteristics of the finite element method, which is widely used to obtain numerical solutions to engineering problems.
- Use numerical methods to simulate the behaviour of infrastructure materials.

CIVE97144 Metals

From:

- Have broad knowledge of the use of metals and alloys in civil engineering.
- Understand the basics of steel metallurgy.
- Have knowledge of the derivation and interpretation of phase diagrams.
- Understand how to change the mechanical and corrosion properties of structural steel, including how to assess steel for flaws.
- Understand the manufacturing processes for steels and their effect on steel properties, including the effect of welding.
- Understand corrosion processes and corrosion prevention techniques for steel structures.

To:

- Demonstrate broad knowledge of the use of metals and alloys in civil engineering.
- Demonstrate detailed understanding of steel metallurgy.
- Relate the microstructure and mechanical and corrosion properties of structural steel to composition, manufacturing processes and welding.
- Demonstrate understanding of environmentally assisted material degradation processes (corrosion, hydrogen embrittlement).
- Design typical structural elements to Eurocode 3

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval with the recommendation that the learning outcomes of the modules above are reviewed during the PGT Curriculum Review process to ensure that they align to a L7 FHEQ standard.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

Faculty of Medicine

2.7 School of Medicine

A100 MBBS/BSc, Intercalated BSc

The Programmes Committee considered a proposal from the School of Medicine to make changes to the Academic Regulations for MBBS to permit dental students to apply for the intercalated BSc pathways within the School with effect from September 2021.

Widening the School's eligibility criteria could increase numbers of incoming external students on BSc pathways. This has financial benefits for the Faculty of Medicine. It also broadens the diversity of the different teaching backgrounds of students on the course, which could help enhance the learning experience for internal students.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020 (for the purposes of marketing and student recruitment, this change would be applied to the September 2021 cohort).

2.8 Short Course- Adapt To Postgrad

The Programmes Committee considered a proposal from the Faculty of Medicine to introduce the above short course, Adapt To Postgrad (ATP) as a standalone, elective, non-credit bearing online short course with effect from September 2020.

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval.

It was suggested that it seemed timely to introduce this online course and that it was positive to see the EDI agenda is being addressed in the short course. There was also potential that this short course could potentially be adapted for other Faculties.

It was assumed that this course is mandatory for all FoM prospective PGT and that students will be reminded to complete this course before they check-in 6 weeks into the academic year.

In terms of signposting to resources, it was recommended to include the Imperial Award - a scheme encouraging students to self-reflection during their studies:
<https://www.imperial.ac.uk/students/imperial-award/>

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

Faculty of Natural Sciences

2.9 MSc in Security and Resilience: Science and Technology

The Programmes Committee considered a proposal from the Department of Physics to make retrospective changes to the programme above with effect from October 2019.

The Department proposed to replace the module 'Cyber Threats: Cyber Solutions' with a module from the Department of Computing 'CO331 Network and Web Security' due to a member of staff leaving College. The module lead left in Summer 2019 and an alternative module suggested by the Department of Computing was used to replace the module with agreement that the learning outcomes mapped.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the retrospective proposal with effect from October 2019.

2.10 Undergraduate Life Sciences

The Programmes Committee considered a proposal from the Department of Life Sciences to make structural changes to their undergraduate provision in light of changes implemented during Curriculum Review which had its first iteration AY 2019-20. The Department have proposed the following changes with effect from October 2020:

Introduction of a new core Year 2 module 'Bioinformatics, Programming and Statistics (Biological Sciences)' to the following programmes:

C100 BSc Biological Sciences

C102 BSc Biological Sciences with Research Abroad

C110 BSc Biological Sciences with a Year in Industry/Research

C1R1 BSc Biological Sciences with French for Science

C1R2 BSc Biological Sciences with German for Science

C1R4 BSc Biological Sciences with Spanish for Science

C1N2 BSc Biological Sciences with Management 3 Years

C1NG BSc Biological Sciences with Management 4 Years

C500 BSc Microbiology

C180 BSc Ecology and Environmental Biology

Introduction of a new core Year 2 module "Bioinformatics, Programming and Statistics (Biochemistry)" to the following programmes:

C700 BSc Biochemistry

C701 BSc Biochemistry with a Year in Industry/Research
C702 BSc Biochemistry with Research Abroad
C7R1 BSc Biochemistry with French for Science
C7R2 BSc Biochemistry with German for Science
C7R4 BSc Biochemistry with Spanish for Science
C7N2 BSc Biochemistry with Management 3 Years
C7NG BSc Biochemistry with Management 4 Years

J700 BSc Biotechnology
J701 BSc Biotechnology with Research Abroad
J702 BSc Biotechnology with a Year in Industry/Research
J7R1 BSc Biotechnology with French for Science
J7R2 BSc Biotechnology with German for Science
J7R4 BSc Biotechnology with Spanish for Science
J7N2 BSc Biotechnology with Management (4 year)

Change in ECTS from 10 ECTS to 7.5 ECTS for the following core modules:

- LIFE50010 Genes and Genomics
- LIFE50019 Protein Science

Change the title of a module:

- LIFE50016 'Molecular Biology with Bioinformatics' to 'Applied Molecular Biology'
- LIFE50011 'Genetics with Statistics' to 'Genetics'

Change in ECTS from 10 ECTS to 7.5 ECTS for the following elective modules:

- LIFE50016 Applied Molecular Biology
- LIFE50011 Genetics

Change in Examination and Coursework weightings in Year 2 to the following modules:
(All individual assessment pass marks of 40%, Must pass:N)

LIFE50016 Applied Molecular Biology

- Exam: 75% (was 60%)
- Coursework: 25%: (was 40%) (Team-Based Learning & 12.5% Presentation – 12.5%)

LIFE50011 Genetics

- Exam: 75% (was 60%)
- Coursework: 25%: (was 40%) (Essay – 12.5% & Practical report – 12.5%)

LIFE50002 Behavioural Ecology

- Exam: 70% (was 75%)
- Coursework: 30%: (was 25%) (poster-10% & mini project 20%)

LIFE50010 Genes and Genomics

From:

Analysis of Cloned Genes practical report. (40% of coursework marks)
Bioinformatics practical (20 % of coursework marks)
An essay produced as part of tutorial exercise. (20% of coursework marks)
Statistics coursework (20 % of coursework marks)

To:

Analysis of Cloned Genes practical report. (40% of coursework marks)
An essay produced as part of tutorial exercise. (40% of coursework marks)
A presentation produced as part of tutorial exercise. (20% of coursework marks)

LIFE50019 Protein Science

From:

MS practical report (60% of coursework marks)
Flash presentation (20% of coursework marks)
Bioinformatics exercise (20% of coursework marks)

To:

MS practical report (40% of coursework marks)
Flash presentation (20% of coursework marks)
Poster on docking practical(40% of coursework marks)

Revision of Year 2 Module Learning Outcomes

Following feedback during last year's curriculum review process, ILOs for year 2 modules have been reviewed. The EDU were invited to run two ILO workshops for the department's year 2 module convenors leading to the revision of ILOs for most modules. The ILOs are now more specific and action orientated and the modules are better constructively aligned. ILO changes have been made to all year 2 module except for Immunology (IMM), Cell Development Biology (CDB) and Integrated Cell Biology (ICB).

- Challenges in Cell Biology
- Protein Science
- Structural Biology
- Genes and Genomics
- Applied Molecular Biochemistry
- Computational Omics
- Topics in Biotechnology
- Applied Molecular Biology
- Behavioural Ecology
- Ecology field skills
- Essentials of Ecology
- Genetics
- Molecular and cell biology skills
- Cellular and Molecular Neuroscience
- Vertebrate Form and Evolution
- Molecular Microbiology
- Bioinformatics, Programming and Statistics (BS)
- Life Sciences Tutors Dissertation

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the retrospective proposal with effect from October 2020.

2.11

Undergraduate Chemistry

F104 MSci Chemistry with Research Abroad (MSci 4YFT)

F101 MSci Chemistry with Research Abroad and a Year in Industry (MSci 5YFT)

F1R1 MSci Chemistry with French for Science (MSci 4YFT)

F1R2 MSci Chemistry with German for Science (MSci 4YFT)

F1R4 MSci Chemistry with Spanish for Science (MSci 4YFT)

The Programmes Committee considered a proposal from the Department of Chemistry for an early introduction of the CR-modules for their incoming Year 4/5 modules for year abroad and language students for with effect from October 2020.

The year abroad programmes were not really considered in the recent departmental review of year 4 which made the year more research-focussed. Given the recent departmental review, the CR proposed no significant structural changes to year 4 at Imperial College. A higher weighting for the research project for year abroad degrees will bring these programmes into better alignment with the year 4 at Imperial College.

Proportional reduction in the lectures module is necessary, and will alleviate the workload problem sometimes encountered with host institutions having considerably more teaching hours per ECTS than Imperial.

It was also proposed that the previously approved synthesis chemistry modules Properties, Reactivity and Synthesis and Topics in Synthesis are superseded by three 5 ECTS modules, namely Chemistry of Molecular Systems, Macromolecules and Materials, and Molecular Synthesis.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the retrospective proposal with effect from October 2020.

2.12

MSc Statistics

G3U1 Statistics (MSc 1YFT)

G3U1A Statistics (Applied Statistics) (MSc 1YFT)

G3U1B Statistics (Biostatistics) (MSc 1YFT)

G3U1B Statistics (Data Science) (MSc 1YFT)

G3U1S Statistics (Statistical Finance) (MSc 1YFT)

G3U1T Statistics (Theory and Methods) (MSc 1YFT)

The Programmes Committee considered a proposal from the Department of Mathematics to make changes to the programme structure of the programme and its streams above with effect from October 2020.

Specific changes to the MSc in Statistics and streams:

Changing elective modules:

The following modules have been changed to all lists of elective modules of the MSc in Statistics and related streams.

- The “Advanced Simulation Methods” module that did not run in the academic year 2019-20 is re-introduced.
- A new module “Deep Learning with Tensor Flow” is introduced to the MSc programme.
- The two Data Science modules, “Data Science I: Data” and “Data Science II: Science” are merged into a single module named “Data Science”.
- The “Non-parametric Smoothing and Wavelets” module will not run for the academic year 2020-21.

Changing elective module configurations per stream:

The following changes have been made to the listed specialisation streams of the MSc in Statistics

- *MSc in Statistics (Theory and Methods):*
The “Advanced Simulation Methods” module is added to the elective group (A) with “Contemporary Statistical Theory” (see note below), “Bayesian Methods” and “Multivariate Analysis”. The students can choose at least two modules from the elective group (A). For completing the 30-32.5 ECTS the students can choose any other modules from the list of elective modules. Students will be restricted to a maximum of two modules each worth 7.5 ECTS.
- *MSc in Statistics (Biostatistics):*
The UG module “Survival models and Actuarial Applications” is removed from the elective group (A) and is added to the elective group (B). The students will need to complete the two modules from elective group (A). A total of 20-22.5 ECTS to be obtained from the remaining elective modules, with at least one of them to be from elective group (B). Students will be restricted to a maximum of two modules each worth 7.5 ECTS.

- *MSc in Statistics (Statistical Finance)*:
The students will need to complete the two modules from elective group (A). A total of 20-22.5 ECTS to be obtained from the remaining elective modules, with at least one of them to be from elective group (B). Students will be restricted to a maximum of two modules each worth 7.5 ECTS (no elective choice change here, elective group C has been removed and added to group B).
- *MSc in Statistics (Data Science)*:
The elective group (A) contains the four modules: “Machine Learning”, “Big Data”, “Data Science” and “Deep Learning with Tensor Flow”. The students will need to complete the remaining 10-12.5 ECTS by choosing modules from the other elective modules, with at most one module worth 7.5 ECTS.

Changing the main details of a module:

- The elective module “Advanced Statistical Theory” has been renamed as “Contemporary Statistical Theory”.
- The Learning and Teaching hours as well as the independent study hours have been changed slightly to reflect the new mode of delivery of the modules. In general, the study hours of the modules are similar to their existing hours.

Changing the assessment of a module:

The assessments of the MSc modules have been redesigned to be suitable for both on-campus and remote students. For example, the current closed book written examinations have been changed to open book remote examinations. Further details can be found in the individual module specification forms.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020.

2.13 **Global MSc in Statistics**

The Programmes Committee considered a proposal from the Department of Mathematics to introduce a fully online programme adapted from its on-campus delivery of MSc in Statistics. The Global MSc in Statistics will be available to students from October 2020.

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval and the following recommendations have since been met by the programme team:

- Review the programme structure to ensure that the elective rules are clear and describe what the student needs to complete in order to gain 90 ECTS;
- Agree the programme title to ensure that the online version is distinguishable from the on-campus version;

Comments to note:

- assume consideration has been taken into account in identifying the right balance between synchronous and asynchronous teaching;
- need to ensure the distance learning stream can cater for remote students from different time zone in particular for the synchronise sessions and also the open book assessment;
- Apart from Blackboard, assume other digital platforms or apps (e.g. Teams or Zoom) will be used to support the teaching and learning. Remote students need to be notified if there are any additional costs in downloading online applications or platform, for example Zoom is no longer free in certain countries;

- Assume there are opportunities for on campus and remote students to learn, interact and/or work on projects together;
- Form B document mentioned the development and delivery staff are currently been trained in the software and hardware to support the new remote programme stream. Assume the newly trained staff will have a trial run or do a pilot before the actual remote delivery to ensure quality of delivery;
- Form C mentioned a number of the MSc in Statistics research projects are done in collaboration with industrial partners which will be available to the students following the remote stream. Assume the industrial partners will be remotely supported to ensure the projects run smoothly;
- Assume measures are in place to monitor the overall quality of online delivery;
- If sufficient staff resources are in place, the department may consider increasing the steady state number to over 40 to maximise income since the degree is online;
- Once the remote stream has proven to be successful, to further maximise income, the department can consider offering selected online modules for professional learners through CPD.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from October 2020 (for the purposes of marketing and student recruitment, this programmes first intake would be October 2021).

Imperial College Business School

2.14 MSc Finance

The Programmes Committee considered a from the Business School to make changes to the programme structure and marking scheme with effect from September 2020.

Assessment Scheme

- Change from two module groups (Group A- Core and Group B- Electives and Project/ Applied Project) to three module groups (Autumn Term Modules, Spring Term Modules and Summer Term Modules).
- Remove Research/ Applied Project mark as a criterion for final degree award.
- Add a minimum mark for individual assessment elements on each module as criteria for final degree award.

New marking scheme

All modules are equally weighted except for the research project which carries a double weight, and the Foundations in Finance module which is zero weighted.

There are three module groups;

- Autumn Term Modules
- Spring Term Modules
- Summer Term Modules

Pass

- An average of 50% or above in each of the 3 module groups
- At least 50% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Finance module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)
- A pass in the international experience module
- A pass mark in the language requirement of the programme

Merit

- An average of 60% or above in each of the 3 module groups
- At least 60% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Finance module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)
- A pass in the international experience module
- A pass mark in the language requirement of the programme

Distinction

An average of 70% or above in each of the 3 module groups:

- At least 70% in the individual assessment elements of each module
- At least 50% in all modules
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundation in Finance module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)
- A pass in the international experience module
- A pass mark in the language requirement of the programme

Macro Finance

Module status change from core to elective. Students will be required to take six core modules, instead of seven as a result, and take one additional elective module.

Core modules learning outcomes change

Updated Learning Outcomes for the Finance programme core modules, further to the programme review

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments:

General module specification comments:

- The module pass mark for graded modules at Level 7 is 50.00%, the pass mark within the module specifications are set at 40.00% and will need to be corrected;
- The Learning and Teaching Approach section appears to be the same across all module outlines with incomplete information about the support classes, “In addition, there will be xx support classes over the duration of the module*.”
- On most modules’ Assessment tabs, as per the guidance, there needs to be some description of each assessment that would be meaningful to a student and including word count/duration;

Individual module specification comments:

Project

- The following statement within the Learning Outcomes section should be reviewed as it does not indicate that there is a parity of learning experience: “The benefit that you get from the project will depend on the nature of the project and will therefore vary...”;
- With the last learning outcome, will students actually be selecting sources, using data, synthesising existing literature? It was suggested that the outcome could be rephased to the following: “Conduct research in a way that demonstrates the ability to select appropriate sources and use data, evaluate and synthesise existing literature, present findings accurately, clearly and concisely.”

International experience trip

- The first learning outcome reflects what students will be experiencing rather than what you plan that they will learn from the experience. It was suggested that the outcome could be rephased to the following: “Demonstrate awareness of an EU centre of business.”
- Assessment in Assessment Strategy section does not currently match the assessments within the Assessment tab.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.15 **MSc Finance and Accounting**

The Programmes Committee considered a proposal from the Business School to make changes to the programme structure and marking scheme with effect from September 2020.

Assessment Scheme

- Change from two module groups (Group A- Core and Group B- Electives and Project/ Applied Project) to three module groups (Autumn Term Modules, Spring Term Modules and Summer Term Modules).
- Remove Research/ Applied Project mark as a criterion for final degree award.
- Add a minimum mark for individual assessment elements on each module as criteria for final degree award.

New assessment scheme

All modules are equally weighted with the exception of three core modules, the research project and the Foundations in Finance & Accounting module. The Autumn term modules Management Accounting and Financial Accounting and the Spring term module Applied Econometrics are each weighted as 0.67. The Research Project carries a double weight and Foundations in Finance & Accounting is zero weighted

There are three module groups;

- Autumn Term Modules
- Spring Term Modules
- Summer Term Modules

Pass

- An average of 50% or above in each of the 3 module groups:
- At least 50% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Finance & Accounting module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Merit

- An average of 60% or above in each of the 3 module groups:
- At least 60% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Finance & Accounting module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Distinction

- An average of 70% or above in each of the 3 module groups:
- At least 70% in the individual assessment elements of each module
- At least 50% in all modules
- At least 40% in each examination
- At least 50% in coursework only modules
- A pass mark in the Foundations in Finance & Accounting module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Core module learning outcomes change

Updated Learning Outcomes for the Finance & Accounting programme core modules, further to the programme review

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments:

Assessment Scheme:

The School were asked to confirm that the below modules are still weighted as 0.67:

- All modules are equally weighted with the exception of three core modules, the research project and the Foundations in Finance & Accounting module. The Autumn term modules Management Accounting and Financial Accounting and the Spring term module Applied Econometrics are each weighted as 0.67. The Research Project carries a double weight and Foundations in Finance & Accounting is zero weighted.

General module specification comments:

- The module pass mark for graded modules at Level 7 is 50.00%, the pass mark within the module specifications are set at 40.00% and will need to be corrected;
- The Learning and Teaching Approach section appears to be the same across all module outlines with incomplete information about the support classes, '*In addition, there will be xx support classes over the duration of the module*.'
- The School has taken a standard learning and teaching approach across compulsory modules. The text has been carefully checked in each module outline to ensure this is appropriate now for each module delivery style
- On most modules' Assessment tabs, as per the guidance, there needs to be some description of each assessment that would be meaningful to a student and including word count/duration;

Individual module specification comments:

Project

- The following statement within the Learning Outcomes section should be reviewed as it does not indicate that there is a parity of learning experience: "The benefit that you get from the project will depend on the nature of the project and will therefore vary...";
- With the last learning outcome, would students actually be selecting sources, using data, synthesising existing literature? It was suggested that the outcome could be rephased to the following: "Conduct research in a way that demonstrates the ability to select appropriate sources and use data, evaluate and synthesise existing literature, present findings accurately, clearly and concisely."

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.16 **MSc Financial Technology**

The Programmes Committee considered a proposal from the Business School to make changes to the programme structure and marking scheme with effect from September 2020.

Assessment Scheme

- Change from two module groups (Group A- Core and Group B- Electives and Project/ Applied Project) to three module groups (Autumn Term Modules, Spring Term Modules and Summer Term Modules).
- Remove Research/ Applied Project mark as a criterion for final degree award.
- Add a minimum mark for individual assessment elements on each module as criteria for final degree award.

New assessment scheme

All modules are equally weighted except for the research project which carries a double weight, and the Foundations in Financial Technology module which is zero weighted.

There are three module groups;

- Autumn Term Modules
- Spring Term Modules
- Summer Term Modules

Pass

- An average of 50% or above in each of the 3 module groups:
- At least 50% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Foundations in Financial Technology module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Merit

- An average of 60% or above in each of the 3 module groups:
- At least 60% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Financial Technology module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Distinction

- An average of 70% or above in each of the 3 module groups:
- At least 70% in the individual assessment elements of each module
- At least 50% in all modules
- At least 40% in each examination
- At least 50% in coursework only modules
- A pass mark in the Foundations in Financial Technology module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Mathematics for Finance

Introduction of new core module

Big Data in Finance 2

Module status change from core to elective, including updates to the Learning Outcomes

Core modules learning outcomes change

Updated Learning Outcomes for the Financial Technology programme core modules, further to the programme review

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments:

Programme Overview:

- It was suggested that the overview could provide examples of the different types of Fintech orientated careers or examples of further academic study;

General module specification comments:

- The module pass mark for graded modules at Level 7 is 50.00%, the pass mark within the module specifications are set at 40.00% and will need to be corrected;
- The Learning and Teaching Approach section appears to be the same across all module outlines with incomplete information about the support classes, ‘*In addition, there will be xx support classes over the duration of the module*.’

Individual module specification comments:

Big Data in Finance II

- An assessment description should be provided for coursework.

Blockchain and Applications

- Please review the first learning outcome “Articulate the core value proposition of blockchain technology; how its etymology drives the new zeitgeist”, the reviewer was unsure how this learning outcome would be measured and if this would be clear to students;

Project

- Please review the module description to provide the student a clear narrative of what to expect in the project module;
- Please confirm that the allocation of study hours are correct, should all the total study hours be allocated to independent study, will there be no tutorials or meetings with supervisors?;
- Please review the learning outcomes to ensure that they are explicit and assessable rather than giving a vague example of what the student will be able to achieve at the end of the module;
- The Module Content section has been left blank, please ensure that this has been completed;

Financial Econometrics in R-Python

- In the Assessment Strategy please specify if this will be a normal type of written exam as it seems like a code-based module.

Accounting and Corporate Finance

- The Module Content section has been left blank, please ensure that this has been completed;
- The module description could be clearer in providing the student a clear narrative of what to expect in the module

Applied Project

- Please review the module description to provide the student a clear narrative of what to expect in the Applied Project module;
- Assessment refers to a 10% practical component which does not align to the assessment strategy of the module.

Mathematics for Finance

- Please ensure that the following sections which have been left blank are completed: Learning and Teaching Approach; Assessment Strategy; and Feedback.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.17 **MSc Investment and Wealth Management**

The Programmes Committee considered a from the Business School to make changes to the programme structure and marking scheme with effect from September 2020.

Assessment Scheme changes

- Change from two module groups (Group A- Core and Group B- Electives and Project/ Applied Project) to three module groups (Autumn Term Modules, Spring Term Modules and Summer Term Modules).
- Remove Research/ Applied Project mark as a criterion for final degree award.
- Add a minimum mark for individual assessment elements on each module as criteria for final degree award.

New assessment scheme

All modules are equally weighted except for the research project which carries a double weight, and the Foundations in Investment & Wealth Management module which is zero weighted.

There are three module groups;

- Autumn Term Modules
- Spring Term Modules
- Summer Term Modules

Pass

- An average of 50% or above in each of the 3 module groups:
- At least 50% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Investment & Wealth Management module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Merit

- An average of 60% or above in each of the 3 module groups:
- At least 60% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Investment & Wealth Management module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Distinction

- An average of 70% or above in each of the 3 module groups:
- At least 70% in the individual assessment elements of each module
- At least 50% in all modules
- At least 40% in each examination
- At least 50% in coursework only modules
- A pass mark in the Foundations in Investment & Wealth Management module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Core modules learning outcomes change

Updated Learning Outcomes for the Investment & Wealth Management programme core modules, further to the programme review

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments:

Programme specification

The third learning outcome is missing an active verb, currently it would read 'will be able to.... strong knowledge of the economics, legal and regulatory framework of the money management industry, and understanding..'

Overall module comments:

- A number of module outlines state that 'In addition, there will be XX support classes over the duration of the module'. Does XX need to be replaced by a number?;
- On some modules further description on the assessments would be useful e.g. word count etc as per the guidance on the template;
- The overall pass mark for PGT modules should be set at 50%, the module pass mark within the modules presented are set at 40%;
- Please check all modules to ensure that a pass mark is entered for all assessments and that the 'Must Pass' field has been completed;
- Coursework is indicated as either group or individual for the modules below – is this a choice for the student and how will this choice be made?
- Mathematics for Finance
- Investment and Portfolio Management

- Financial Econometrics
- Asset Allocation and Investment Strategies

Individual module specification comments:

Macro Economics

- ILO4 – ‘Solve exercises sets based on the material – This ILO feels quite process orientated, should the outcome should state what students will be able to do through solving these exercises e.g. describe, analyse, evaluate etc.
- Coursework is indicated as either group or individual – is this a choice for the student and how will this choice be made?

Derivatives

- Coursework is indicated as either group or individual – is this a choice for the student and how will this choice be made?

Applied project

- Assessment – 100% individual assignment although the strategy on the first tab made reference to some elements of coursework being group work. This could be confusing to students so some further clarification would be useful.

Project

- Assessment – 100% individual assignment although the strategy on the first tab made reference to some elements of coursework being group work. This could be confusing to students so some further clarification would be useful.

Applied Project (Work Placement)

- Assessment – 100% individual assignment although the strategy on the first tab made reference to some elements of coursework being group work. This could be quite confusing to students so some further clarification would be useful.

Foundations in Investment and Wealth Management

- Assessment – One of the assessments (coursework) needs assessment description to be completed. The School were asked to confirm if these assessments need to be passed.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.18 **MSc Risk Management and Financial Engineering**

The Programmes Committee considered a proposal from the Business School to make changes to the programme structure and marking scheme with effect from September 2020.

Withdrawal of non-credit bearing core module
BUSI97140 Visual Basic

Assessment structure

- Change from two module groups (Group A- Core and Group B- Electives and Project/ Applied Project) to three module groups (Autumn Term Modules, Spring Term Modules and Summer Term Modules).
- Remove Research/ Applied Project mark as a criterion for final degree award.
- Add a minimum mark for individual assessment elements on each module as criteria for final degree award.
- Remove reference to Visual Basic (VBA)

New assessment structure

All modules are equally weighted except for the research project which carries a double weight, and the Foundations in Risk Management & Financial Engineering module which is zero weighted.

There are three module groups;

- Autumn Term Modules
- Spring Term Modules
- Summer Term Modules

Pass

- An average of 50% or above in each of the 3 module groups:
- At least 50% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Risk Management & Financial Engineering module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Merit

- An average of 60% or above in each of the 3 module groups:
- At least 60% in the individual assessment elements of each module
- At least 40% in each examination
- At least 50% in coursework-only modules
- A pass mark in the Foundations in Risk Management & Financial Engineering module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Distinction

- An average of 70% or above in each of the 3 module groups:
- At least 70% in the individual assessment elements of each module
- At least 50% in all modules
- At least 40% in each examination
- At least 50% in coursework only modules
- A pass mark in the Foundations in Risk Management & Financial Engineering module (an average of 50% or above across the assessments, with a minimum mark of 40% in each individual component)

Core modules learning outcomes change

Updated Learning Outcomes for the Risk Management & Financial Engineering programme core modules, further to the programme review

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments :

Overall module comments:

- A number of module outlines state that 'In addition, there will be XX support classes over the duration of the module'. Does XX need to be replaced by a number?;
- On some modules further description on the assessments would be useful e.g. word count etc as per the guidance on the template;
- The overall pass mark for PGT modules should be set at 50%, the module pass mark within the modules presented are set at 40%;
- Please check all modules to ensure that a pass mark is entered for all assessments and that the 'Must Pass' field has been completed;
- Coursework is indicated as either group or individual for the modules below – is this a choice for the student and how will this choice be made?
 - Financial Statistics
 - Investments and Portfolio Management
 - Stochastic Calculus for Finance

- Risk Management and Valuation
- Financial Engineering
- Empirical Finance Methods and Applications

Individual module specification comments:

Project

- Assessment – 100% individual assignment although the strategy on the first tab made reference to some elements of coursework being group work. I think this could be confusing to students so some further clarification would be useful.

Applied Project

- Assessment – 100% individual assignment although the strategy on the first tab made reference to some elements of coursework being group work. I think this could be confusing to students so some further clarification would be useful.

Applied Project (work placement)

- Assessment description required

Foundations in risk management and financial engineering

- Assessment – One of the assessments (coursework) needs assessment description to be completed.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.19 **MSc International Management**

The Programmes Committee considered the redesigned programme above from the Business School with effect from September 2020.

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments :

- Assessment strategy on the programme specification does not outline an approach to assessment however, a good range of assessment methods are list. This range is reflected in the module outlines where assessment details are provided.
- The assessment strategy and assessment tab on several modules has the same wording:

‘This module is assessed by 100% summative coursework. The coursework is usually broken down into various assessment elements, each aiming to assess the achievement of specific learning outcomes. Some assessment elements may be group work or individual. Usually a substantive piece of coursework at the end of the module will assess students’ ability to synthesise and apply the learnt materials.’

This wording indicates that there are various assessment elements, but these are not always indicated on the assessment tab. It is also not always clear if these are formative or summative or how these elements are linked to the module learning outcomes.

- The assessment tab should also include a short description of the assessments (e.g. 2000 words essay) which will be meaningful to students as well as the weighting of these assessments. It is recommended that these sections are reviewed in light of the guidance that is provided on the module specification forms.

The modules where this should be addressed are:
 Sustainability and Competitive Advantage
 Operations Management
 Energy Business

Management, Strategy and Innovation in Fintech
 Digital Transformation: Leading real-world change
 Competitive and corporate strategy
 Decision analytics
 Financial Management
 Innovation and technology strategy
 Economics
 Venture Capital and Growth Finance
 Leading Social Innovation
 Private Equity
 Emerging technologies in marketing
 Brand management
 Business Economics
 Corporate finance
 Global operations and projects
 Innovation management
 Organisational behaviour
 Strategic management
 Leadership skills
 Entrepreneurship
 Consulting project
 Corporate strategy
 Service analytics

Individual module specification comments:

Applied Project (Work Placement)

- Assessment – 100% individual assignment although the strategy on the first tab made reference to some elements of coursework being group work. This could be quite confusing to students so some further clarification would be useful.

Climate change and business strategy

- The assessment strategy refers in an individual essay and class participation, but these are not indicated on the assessment tab

Sustainability and competitive advantage

- One learning outcome refers to ‘demonstrate knowledge...’ How might students demonstrate this knowledge? I would recommend considering this in the context of the need for ILOS to be level 7.
- The allocated study hours indicate 24 hours of lectures, but the Learning and Teaching strategy refers to 10x2 hours sessions.

Operations management

- The intended learning outcomes need further development. Currently only 1 ILO that refers to students being able to ‘understand’. Would recommend considering these in the context of the need for ILOs to be level 7.

Leading social innovation

- ECTS is 5.5 – School to confirm that this module is weighted correctly.

Brand management

- 4 of the ILOS are about ‘understanding’. Would recommend that these are made more specific (how will students demonstrate this understanding?) and level 7.

Design thinking for innovation

- ILO 2 could be split into 2 for easier comprehension
- Assessment strategy refers to class participation, final presentation and project journal but these are not reflected on the assessment tab.

Organisation behaviour

- It was recommended that the School review the ILOs to make more in line with the need to be level 7

Entrepreneurship

- Allocated teaching hours indicates 13 hours of lectures and 2 hours of group teaching but the Learning and Teaching strategy refers to 10x2 hour sessions.

Career and Leadership Development

- It was recommended that the learning outcomes are reviewed and made more specific. How would students show/demonstrate that they will have the relevant tools?
- Learning and teaching strategy – refers to ‘In addition there will be xx support sessions’. Not clear what xx is.

Service analytics

- 2 of the ILOs refer to ‘understand’ so would recommend being more specific. How would students demonstrate or need to use this understanding?
- Modules that have ILOs which might serve as good examples are Energy Business, European Immersion, Financial Management and Management Capstone.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.20 **MSc Management**

The Programmes Committee considered the redesigned programme above from the Business School with effect from September 2020.

The Programmes Committee agreed to recommend the proposal to the Quality Assurance and Enhancement Committee for approval subject to the following recommendations and comments:

- The programme states that it prepares students for a career tackling contemporary and complex business issues. In this era of disinformation and exploitation, ranging back to Enron through to Facebook, Sports Direct, zero hours contracts and massively inflated CEO wage multiples, the programme team should consider including a core ethics component. This would seem to be essential if the course posits to prepare students for future challenges, rather than to reproduce existing management practices. I can see that some modules mention ethics, but is this sufficient to prepare students for contemporary issues?
- Programme learning outcomes are currently not aligned to a FHEQ level 7 standard and are vaguely articulated. For example, what constitutes a “viable solution”, The current learning outcomes do not demonstrate a level of higher learning e.g. critical thinking. The School should review how these reflect the MSc Business and Management subject benchmark statements.
- Recruiting: Is the Kira platform an ethical way to recruit students? Is it inclusive and does it result in real diversity, or does it privilege a select subset of people?
- Project and Placements: Work placement and Social Project seem to be less well integrated than the Consulting Project. Are students who take the former two disadvantaged?
- ECTS: BUSI97621 and BUSI97183 are listed as having 5.5 ECTS– Please confirm that this module is weighted correctly.
- Exchange electives: these appear to be small components and it was asked whether it was worth it for the students or for the administration to run these;
- Pass marks: some pass marks are set at 40%. These should be set at 50% to reflect the pass mark of Master’s modules;

- Programme structure: some modules e.g. climate change, sustainability, aren't listed in the Programme Structure table;
- There are some well-articulated and appropriate LOs across many modules, but LOs in some modules are not clearly set at level 7. These often don't explicitly focus on higher level learning skills such as critical thinking; some vaguely worded LOs e.g. "apply MBA knowledge" – it was unclear how this would be measurable;
- It was suggested that all LOs across all modules are reviewed with the EDU and precisely articulated so that students are in no doubt that they are learning at the right level and are able to understand exactly what it is they're learning. In addition, it would be beneficial to enforce a coherent and consistent style across modules – there is considerable variability in the quality and phraseology used.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

2.20 **Weekend (Saudi Aramco Corporate Stream) MBA**

The Programmes Committee considered a proposal from the Business School to introduce an additional stream of the existing Weekend MBA programme, to be delivered as a corporate stream for Saudi Aramco employees with effect from October 2020.

The Programmes Committee recommends that the Quality Assurance and Enhancement Committee approve the proposal with effect from September 2020.

3. The following Suspensions and Withdrawals of existing programmes

Programme Suspension with effect for October 2021 entry- For one academic year:

Postgraduate Civil & Environmental Engineering

- **H2A8 MSc Environmental Engineering & Business Management**
- **H2B1 MSc Hydrology & Business Management**
- **H2A4 MSc Soil Mechanics & Business Management**
- **H2B3 MSc Transport & Business Management**

Postgraduate Computing

- **G5U13 MSc Computing (Visual Computing and Robotics) (MSc 1YFT)**

