

## Faculty Education Committee (FEC) Faculty of Natural Sciences

**DATE:** 25 September 2019  
**TIME:** 12:00 – 14:00  
**LOCATION:** SALC 6

### MINUTES – APPROVED

#### 1. Welcome and Apologies

##### Present:

Prof Emma McCoy (EMcC)	vice-Dean (Education) FoNS (Chair)
Prof David Evans (DE)	DUGS Mathematics
Prof Robert Forsyth	Deputy - DUGS Physics
Dr Rudiger Woscholski	MRes Director of Studies in Chemistry
Prof John Seddon (JS)	Faculty Senior Tutor
Dr Mike Tennant	CEP Representative
Mr Ashley Brooks (AB)	ICU Deputy President (Education)
Ms Emma Couves	GSU Representative
Ms Moira Sarsfield (MS)	Senior Learning Technologist
Prof Jonathan Mestel (JM)	College Consul, Maths
Prof Stephen Warren	College Consul, Physics
Dr Vijay Tymms (VT)	FoNS Programmes Committee Rep., Physics
Ms Nazia Hirjee (NH)	Faculty Operations Officer
Mr Stefan Hoyle (SH)	Faculty Safety Representative
Dr Felicitas Starr-Egger	CLCC representation
Ms Rebecca Middleton (RM)	Faculty Education Manager
Ms Lucy Heming	Senior Assistant Registrar, Registry
Ms Kasia Kmiecowski (KK)	Committee Secretary, FoNS

##### Apologies:

Prof Donald Craig	DUGS Chemistry
Dr Huw Williams	DUGS Life Sciences
Dr Niki Gounaris	Life Sciences PGT Representative
Dr William Proud	Director of Postgraduate Studies, Physics
Ms Michaela Flegrova	RCSU Academic Affairs Officer
Mr Mohit Devgan	GSU President
Ms Kate Ippolito	Educational Development Unit (EDU) Representative
Mr Mark Anderson	Educational Development Unit (EDU) Representative
Mr Will Bennett	Information and Communication Technologies

#### 2. Faculty of Natural Sciences Education Committee Terms of Reference and Membership 2019/20 [NSEC.2019.00]

The committee noted the terms of reference and membership for 2019-20.

#### 3. Minutes of the Previous Meeting

The committee reviewed the minutes from the FoNS Education Committee (NSEC) held on Wednesday 30 April 2019 [NSEC.2019.01] and the Committee Action Tracker [NSEC.2019.02]. With

two minor correction as listed below, the minutes were agreed as an accurate record and the action tracker document was updated.

### **1. Welcome and Apologies**

*Prof Jonathan Mestel College Consul, Maths*

#### **11.4 Learning Technology Matters – MS reported the following:**

- *Additional Learning Technology Team members had been recruited.*
- *There had been a high demand for the ABC Learning Design workshops.*
- *A member-of-staff **new committee** will be overseeing e-learning introduced as part of the Learning and Teaching Strategy. The ToR still needs to be confirmed but the plan is to assign two reps for each department to oversee the pedagogy transformation.*

#### **4. Matters arising from the Minutes/ Action Tracker [NSEC.2019.02]**

**Action 9** – LS PTES Action Plan still needs to be amended and Physics Action Plan has not been submitted yet.

**Action 13, 15, 16 and 17** – were noted as complete.

#### **5. New Programme Proposal [NSEC.2019.03]**

**5.1** The committee considered a proposal from the Department of Mathematics for a new MSc in Machine Learning (ML) and Data Science (DS) Online MSc. This programme gained strategic approval from OLIG on Wednesday 11<sup>th</sup> September 2019. EMcC, who is one of the Academic Leads for this MSc, explained that the College looked at various on-line course providers and Coursera seemed the most suitable for this programme. This fully online degree will be a part-time course, delivered across two-years, starting in October 2020. It will train students in the computational, mathematical, and statistical foundations of machine learning, preparing them for the most advanced engineering roles in areas such as AI, data science and machine learning. In addition, students will have the opportunity to directly interact with departmental faculty at Imperial. She added that since it is an online course, it will allow students for whom study in London or full-time study is not feasible. The plan is also to attract international students to foster global collaboration and research between students. There will be no campus-based induction week as this will be all done online. VT had noted several comments about the MSc programme which he will send to EMcC.

***ACTION 1: VT to send his comments on the new MSc in Machine Learning and Data Science Online MSc to EMcC.***

In response to committee questions, EMcC said that:

- The course will have 90 ECTS across year one and two.
- There is already interest from industry in this course. This might be partially, because some of the students may already work part-time in relevant businesses.
- The number admitted to the course will be limited to between 60-100 students. This is because staff will provide online supervision of the projects undertaken by the students.
- The curriculum covers the ethics and limitations of machine learning, to equip students with the skills to ethically apply these techniques to their future work.
- Any mitigating circumstances will be dealt with in accordance with the College's Policy.
- As per Coursera's recommendation, all videos included in the course material are 6-minutes long - this is considered to be the optimal time in which students can focus on the video content.
- The closest existing programmes in the College are MSc Computing (Machine Learning) and MSc Artificial Intelligence in the Department of Computing (DoC) and the MSc in Business Analytics in the Business School (BS). Both programmes in DoC are residential only, the BS course does offer a part-time online option. FoE are also proposing a new ML course and

Omar Matar and Emma McCoy will be arranging a meeting with course directors of relevant courses to discuss overlap and marketing strategy.

**Subject to Programmes Committee and QAEC approval, the committee approved the proposal from the Department of Mathematics for introducing the new online MSc in Machine Learning and Data Science.**

**6. Programme Withdrawals [NSEC.2019.04]**

The committee considered a proposal from the Department of Mathematics to suspend the BSc Mathematics, Optimisation and Statistics from 2021/22 academic year. DE reported that there are 2-3 students on the course hence the decision to withdraw it.

**Subject to Programmes Committee and QAEC approval, the committee approved the decision to suspend the BSc in Mathematics, Optimisation and Statistics from 2021/22.**

**7. MIT Exchange review [NSEC.2019.05]**

The committee considered the request of the continuation of the Student Exchange Agreement with MIT beyond the 2-year pilot period (acknowledging operational and delivery implications). RM explained that the International Relations Office (IRO) had recommended that Imperial continues this one-year programme as it gives great opportunity to Imperial UG students to study at MIT and participate in research experiences. She added that ten departments from FoNS and FoE at Imperial had engaged with the exchange so far and 21 Imperial students are currently spending the academic year at MIT. Although, there are only 10 MIT students at Imperial this year, MIT had offered to continue the programme as an ongoing, recurrent opportunity. She added that one of the issues to consider by Imperial students is the high cost of health insurance. Another matter raised by Imperial students related to housing. In some cases, the accommodation had not been allocated prior students' arrival or had been very unsatisfactory. This created a high level of stress and disappointment among the students. SH requested if there is a MoU between Imperial and MIT and whether it contains provisions for safety management. RM will request a copy of MoU so it can be reviewed.

***ACTION 2: RM to request a copy of MoU between Imperial and MIT to check if it contains provisions for safety management.***

**8. FoNS Prizes for Excellence 2020 [NSEC.2019.06]**

The committee considered the Draft Prizes for Excellence 2020 document.

RM reminded the committee that the FoNS Annual Prizes for Excellence are currently awarded in four categories:

- Personal Tutoring and Pastoral Support;
- Excellence in Teaching;
- Excellence in the Support of Teaching and Learning;
- Excellence in Health and Safety.

She drew the attention of the committee to the procedures listed in the *Draft Prizes for Excellence 2020* document, particularly to the changes in the nomination process for 2020 which state that the following prizes must be supported by students, via the Student Representation network:

- Personal Tutoring and Pastoral Support
- Teaching
- Support of Teaching and Learning

Any nominations for the above made without the confirmed support of at least one student will not be accepted.

**The committee approved the *Draft Prizes for Excellence 2020* document.**

**9. Surveys: National Student Survey [NSEC.2019.07]**

The committee considered the National Student Survey 2019: Summary of College Results. The College's response rate was 74% (in 2018 it was 75%) and the overall satisfaction in the College remained at 82%. The College's satisfaction fell across five categories:

- Assessment and Feedback (-3%)
- Organisation and Management (-1%)
- Learning Community (-1%)
- Student Voice (-2%)
- Students' Union (-5%)

The committee discussed the lower percentage satisfaction in all NSS Question Categories, particularly in the Departments of Chemistry (61.4%), Life Sciences-Biochemistry (78.5%) and Physics (64.1%). One of the reasons could be that for a number of FoNS students, Cambridge or Oxford were their first choice of place to study, unlike the FoE students whose first choice was likely to have been Imperial (due to the fact that specific engineering subjects are not offered at Oxbridge). Therefore, FoNS students who were rejected by Cambridge or Oxford may feel dissatisfaction from the start. It was also noted that not all department staff had received the NSS comments via their HoDs. NH and RM urged for all the academics involved in teaching to review the NSS Summary and comments and to address all the issues raised by students. DE added that some of the statistics used in the College-level data that is widely circulated are not representative; for example, the *Assessment and Feedback* actually covers four specific questions. In the Department of Mathematics clarity of marking criteria is the issue for students, rather than the timing and quality of feedback.

**10. Surveys: ICU response to the NSS 2019 [NSEC.2019.08]**

The committee considered the ICU response to the NSS 2019.

AB reported that the recurring theme was lack of parity of student experience with equally strong positive and negative comments within the same sections particularly in *Assessment and Feedback*, *Academic Support*, *Organisation and Management* as well as in *Learning Community*. It had also been identified that many issues are interconnected, particularly student wellbeing which is linked to areas such as assessment and feedback or academic support.

EMcC said that the issues raised by the ICU should be addressed by the relevant departments. VJ pointed that the Department for Physics constantly makes changes and improvements, but the students' satisfaction remains very low. The committee felt that perhaps some changes are taking a long time to implement, or to have an effect. Also, students compare with their peers various learning and teaching aspects which might be much better in other departments hence they may feel less satisfied and therefore lower their scores in certain areas.

AB also drew the committee's attention to the comments on accessing course materials in other departments. Some students had expressed they would like a broader set of material made available, as often a course taught in one department would relate to the interests of students in another. Therefore, they had recommended creating a simple online form to request access to course material in other departments. In response to that, EMcC said that some course materials are restricted to prevent students from overusing the content and adding extra work to their already busy schedules. NH proposed creating a simple system where students could request an access to course materials which would have to be then approved by a department.

**11. Surveys: UG SOLE lecturer/ module Spring results [NSEC.2019.09]**

The committee considered the results of the undergraduate Spring 2019 SOLE survey. It was noted that UG SOLE survey participation rates among FoNS students were even lower than in 2018:

- Chemistry 23% (-10%)

- Life Sciences 37% (-5%)
- Mathematics 41% (-6%)
- Physics 19% (-9%)

As already discussed in the past meetings, SOLE questions do not seem to be 'fit for purpose' hence it has a bad reputation among students. AB added that the students do not feel confident that staff are implementing the SOLE recommendations, hence this might affect the response rate as well. If it was replaced by a different survey which would be more flexible with regards to questions and timing, students might be more likely to participate. JM, who is a member of the Survey Committee, asked members to send him any specific comments on how the SOLE questions could be improved.

**ACTION 3: ALL to send their comments on SOLE to JM.**

**12. Surveys: PG SOLE lecturer/ module Spring results [NSEC.2019.10]**

The committee considered the results of the postgraduate Spring 2019 SOLE survey. It was noted that PG SOLE survey participation rates among FoNS students were very low again:

- CEP 42% (-3%)
- Chemistry 63% (+6%)
- Life Sciences 21% (+1%)
- Mathematics 57% (-14%)
- Physics 29% (+8%)

**13. Review of External Examiner Reports [NSEC.2019.11]**

The committee considered the Summary of External Examiner Reports Taught Programmes in 2017/2018 and Submission of Reports for Undergraduate Provision in 2018/2019.

**14. UG Entry Requirements [NSEC.2019.12]**

The committee considered the Undergraduate Entry Requirements and Selection Details - 2021 Entry (2020 UCAS Cycle).

**15. Timeliness of Academic Feedback to Students**

This is a standing item on the Agenda, but as term had not started, it was noted that there was nothing to report at this stage.

**16. Standing Items:**

**16.1 Accessibility for teaching and learning materials**

Moirra Sarsfield, Jonathan Blatchford, Rachel Hayes and Judy Asenguah gave a presentation on *Accessibility for teaching and learning materials*. MS asked the committee to provide feedback on the presented digital devices which aim at improving the accessibility for teaching and learning materials. The comments should be sent before the next College Learning and Teaching Committee on 7<sup>th</sup> November.

**ACTION 4: ALL to send feedback to EMCC on presented digital devices before the next College Learning and Teaching Committee on 7<sup>th</sup> November.**

**ACTION 5: KK to circulate the Accessibility for teaching and learning materials slides to the committee- see attached.**

**16.2 Learning Technology Matters – MS reported the following:**

- ELIG Committee – first meeting will be at the end of October – the DUGS and the DPS from each department are invited to attend or to nominate a representative. MS asked the DUGS and DPS to send details of who will attend the ELIG meetings to Mary Scott

([mary.scott@imperial.ac.uk](mailto:mary.scott@imperial.ac.uk)) at their earliest convenience so that she can send invitations.

**ACTION 6: DUGS and DPS to send details of who will attend the ELIG meetings to Mary Scott ([mary.scott@imperial.ac.uk](mailto:mary.scott@imperial.ac.uk)) so that she can send invitations.**

- The Learning and Technology Team had been working on curriculum review implementation/pedagogic transformation. This included:
  - A system for Peer Appraisal of Groupwork which will be used extensively in CEP.
  - An online interactivity exploring linear and non-linear regression for Y1 Life Sciences students.
  - A variety of new active learning and micro-assessment techniques for Y1 physics and chemistry, including concept mapping, two-stage assessment techniques, active learning in teams.
  - ABC workshops, Active Learning in Teams workshops, Learning Analytics workshop. There are plans to run hands-on active learning sessions in the refurbished Blackett LT.
- There are interesting developments across the College in the field of learning analytics – (a) A pilot project exploring the Jisc learning analytics system and (b) a vision group as part of the Banner/SIMP project looking at student information dashboards.

**16.3 Safety** – SH reported the following matters:

- The Safety Inductions had all been scheduled to take place in the first week of October 2019. Thanks to the Dept UG and PG admins for their assistance in arranging the sessions.
- FoNS Safety Team had assisted Chemistry to integrate safety and risk into the new Chemistry Culinary Kitchen course.
- A MRes student from FoM who has an assistance dog will be doing a lab rotation in Life Sciences. The assessments and procedures had all been agreed with the research group and student.
- Additional MSRH Lab Inductions had been scheduled for the new students working in MSRH.
- The Practical Laser Safety Course for PhD students had been relocated to H455.
- Dates for offsite assessment training for MRes in TFE had been set up. The risk assessment represents 5% of the final mark for the students.

**16.4 Education** – there were no updates to report.

**16.5 Faculty Senior Tutor** – JS reported the following matters:

- The Faculty Mitigating Circumstances Panels (FMOP-UG and FMOP-PG) had now been set up to oversee the departments' Mitigating Circumstances Boards to ensure consistency in the decision-making processes. The two separate FMOP meetings to discuss UG and PG matters took place on 18<sup>th</sup> September. The panels will meet again in November/December.
- The Faculty is in the process of reviewing the pastoral care offered to PG students within Departments.
- [The Faculty Wellbeing Support page](#) for students had been developed.
- The College had been looking into adopting a scheme where a named person chosen by a given student could be contacted where the College had serious concerns about the student's mental wellbeing. The scheme is being piloted under SIMP and hopefully it will be implemented at Imperial College in January 2020.

**16.6 FOO** – there were no updates to report.

**16.7 Registry** - there were no updates to report.

- 17 Surveys: Update for 2019-20 session [NSEC.2019.13]**  
The committee noted the Survey Calendar for 2019-20 document.
- 18 Surveys: Student Experience Survey Results and Action Plan [NSEC.2019.14]**  
The committee noted the Student Experience Survey Results and Action Plan.
- 19 List of External Examiner Appointments for which new nominations are required [NSEC.2019.15]**  
  
The committee noted the list of External Examiner appointments for which new nominations will be required for the 2019-20 academic year.
- 20 Outstanding UG External Examiner Reports for 2018-19 Academic Year [NSEC.2019.16]**  
  
The committee noted the list of outstanding undergraduate External Examiner reports for the 2018-19 academic year at Appendix A.
- 21 Minutes of the Previous Meetings of the NSEC Sub-Committees**  
The committee noted the latest, confirmed minutes from the UG/Masters Sub-Committee meetings: <https://www.imperial.ac.uk/natural-sciences/education-and-teaching/fons-education-committee/>
- 22 Representation on College Committees 2019/20:**  
The committee noted the following Members of NSEC and FoNS staff, who sit on the College-level Committees listed below:
- Senate:**
- Emma McCoy, FoNS vice-Dean (Education), Chair of NSEC;
  - Niki Gounaris, Life Sciences DPS, Elected Member (Natural Sciences)
  - Karen Makuch, CEP, Elected Member (Natural Sciences)
- <http://www.imperial.ac.uk/about/governance/academic-governance/senate/>
- Quality Assurance and Enhancement Committee:**
- Rebecca Middleton, Faculty Education Manager
- <http://www.imperial.ac.uk/about/governance/academic-governance/senate-subcommittees/quality-assurance-enhancement-committee/>
- Learning and Teaching Committee:**
- Emma McCoy, FoNS vice-Dean (Education)
- <https://www.imperial.ac.uk/about/governance/academic-governance/senate-subcommittees/learning-and-teaching-committee/>
- Programmes Committee:**
- Vijay Tymms, Physics, Representative from the Faculty of Natural Science
  - Jonathan Mestel, Mathematics, College Consul
- <https://www.imperial.ac.uk/about/governance/academic-governance/senate-subcommittees/programmes-committee/>
- 23 Chair's Report**  
There were no actions taken by the Chair on behalf of the committee.
- 24** The committee noted the List of suspended and withdrawn programmes 2019/20. **[NSEC.2019.17]**
- 25** The committee noted the List of accredited programmes 2019/20. **[NSEC.2019.18]**

**26 New regulations, policies & Procedures for 2019-20 [NSEC.2019.19]**

The committee noted the new and revised policies agreed by QAEC for 2019-20.

**27 Minutes of the Postgraduate Professional Development Committee (PPDC)**

The committee noted the latest minutes from the Graduate School's [Postgraduate Professional Development Committee](\\icfs5g.cc.ic.ac.uk\Registry\10.Committees\PPDC): <\\icfs5g.cc.ic.ac.uk\Registry\10.Committees\PPDC>

**28 Minutes from QAEC, Senate and the other Faculties' Education Committees**

The committee noted the latest minutes from the [QAEC](#), [Senate](#) and the other [Faculty Education Committees](#)

**29 Any other business**

There were no issues discussed.

**30 Dates of Future Meetings (2019/20 Committee Schedule)**

Committee	Date	Time
UG Sub-Committee of NSEC	Weds 09/10/19	12.30-14.00
Masters Sub-Committee of NSEC	Weds 23/10/19	12.30-14.00
NSEC	Weds 27/11/19	12.00-14.00
UG Sub-Committee of NSEC	Weds 04/12/19	12.30-14.00
UG Sub-Committee of NSEC	Weds 29/01/20	12.30-14.00
NSEC	Weds 26/02/20	12.00-16.00
Masters Sub-Committee of NSEC	Weds 04/03/20	12.30-14.00
UG Sub-Committee of NSEC	Tues 17/03/20	12.30-14.00
NSEC	Weds 29/04/20	12.00-14.00
UG Sub-Committee of NSEC	Weds 27/05/20	12.30-14.00
Masters Sub-Committee of NSEC	Weds 03/06/20	12.30-14.00