



GRADUATE STUDIES COMMITTEE

Minutes of the online meeting held via Zoom
at 10am on Thursday 28 January 2021

XX = Council relevance

Present (Ex officio):

Professor Martine Smith, Dean of Graduate Studies (Chair)

Directors of Teaching and Learning (Postgraduate) as follows:

Professor Rachel Mary Mc Loughlin, School of Biochemistry and Immunology

Professor Mary-Lee Rhodes, Trinity Business School

Professor John Boland, School of Chemistry

Professor Owen Conlan, School of Computer Science and Statistics

Professor Sarah-Jane Scaife, School of Creative Arts

Professor Ioannis Polyzois, School of Dental Science

Professor Keith Johnston, School of Education

Professor Biswajit Basu School of Engineering

Professor Bernice Murphy, School of English

Professor Matthew Campbell, School of Genetics and Microbiology

Professor Ashley Clements, School of Histories & Humanities

Professor James Hadley, School of Languages, Literatures & Cultural Studies

Professor Deirdre Ahern, School of Law

Professor Kathleen McTiernan, School of Linguistic, Speech & Communication Sciences

Professor Manuela Kulaxizi, School of Mathematics

Professor Kumlesh Dev, School of Medicine

Professor Cian O'Callaghan, School of Natural Sciences

Professor Fiona Timmins, School of Nursing and Midwifery

Professor Cristin Ryan, School of Pharmacy & Pharmaceutical Sciences

Professor Hongzhou Zhang, School of Physics

Professor Ladislav Timulak, School of Psychology

Professor Prof. Daniele Pevarello, School of Religion

Professor Thomas Chadefaux, School of Social Sciences & Philosophy

Professor Paula Mayock, School of Social Work and Social Policy

Professor Jake Byrne, Academic Director, Tangent

Ms Gisèle Scanlon, Graduate Students' Union President

Ms Bhiswetta Bhattacharjee, Graduate Students' Union Vice-President

In attendance for all items:

Ms Patricia Callaghan, Academic Secretary, Head of Trinity Teaching and Learning, (TT&L)

Ms Breda Walls, Director of Student Services

Ms Fedelma McNamara, Director of Internationalisation, TCD Global



Dr Cormac Doran, Assistant Academic Secretary, Graduate Education, TT&L
Mr Martin McAndrew, Postgraduate Student Support Officer, Senior Tutor's Office
Ms Ewa Sadowska (Academic Affairs, TT&L): Secretary to the Committee

Apologies

Dean of Research: Vacant
Dr Geoffrey Bradley, Information Technology Services Representative
Ms Siobhan Dunne, Sub Librarian for Teaching, Research and User Experience

Directors of Teaching and Learning (Postgraduate) as follows:

In attendance for individual items:

Prof. Iouri Gounko (School of Chemistry)	for item GS/20-21/040
Prof. Eimear Nolan (Trinity Business School)	for item GS/20-21/041

The Dean extended a special welcome to two new members, Prof. Daniele Pevarello replacing Prof. Gillian Wylie in the School of Religion for one term, and Prof. Mary-Lee Rhodes replacing Prof. Sinéad Roden in Trinity Business School.

GS/20-21/038 Minutes of 3 December 2020

The minutes were approved as circulated.

GS/20-21/039 Matters Arising

The Dean advised members that all *Actions* from the previous meeting had been attended to. *Actions* with more specific update provided by the Dean are referred to below.

Re: GS/20-21/019 A new course proposal: Pg Cert in Advanced Ageing and Frailty Studies: The Dean advised that the proposal had been approved by the January Council.

Re: GS/20-21/020 A new course proposal: (CHARM- EU) – Master in Global Challenges for Sustainability: The Dean advised that the proposal had been approved by the January Council.

Re: GS/20-21/021 PG Open Day 2021: The Dean reminded members that the PG Open Day will take place on the 6th March and reiterated that Schools should advise the Director of Marketing of their School representative at the event. She was still expecting to receive outstanding research slides from Schools. Schools should also submit a video on PG studies in their Schools.

Action GS/20-21/021: Schools to submit outstanding research slides and PG Studies videos for PG Open Day in March.

Re: GS/20-21/028 A new course proposal (HCI P1): Pg Dip in Applied Social Data Science: The Dean advised that a positive external report had been received and the proposal would be submitted to the February Council.



Re: GS/20-21/030 Academic integrity of approved PGT courses: The Dean advised she was reviewing the received feedback in preparation for discussing it at a future meeting.

Re: GS/20-21/031 PGT course committee "Terms of Reference": The Dean advised she was collating the received feedback to email it to members in preparation for bringing it for further discussion at a future meeting.

Action GS/20-21/031: The Dean to email collated feedback on PGT course committee ToR to members.

Re: GS/20-21/032 International partnership with Northeastern University: The Dean advised that a pre-Christmas meeting was re-scheduled but she was having interim discussions with interested Trinity academics.

Action GS/20-21/032: Academic staff interested to join the discussion on partnership with Northeastern should contact the Dean.

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GS/20-21/040 A new course proposal (HCI Pillar 1): Pg Dip in Circular Economy and Recycling Technologies

Members had an opportunity to review the new course documentation in advance of the meeting. The Dean welcomed Prof. Iouri Gounko (prospective Course Director) from the School of Chemistry and provided a brief overview of the proposal in a short power-point presentation. She noted that the proposed course was at level 9 on the NFQ with a credit volume of 60 ECTS leading to a major award of postgraduate diploma to be delivered over one year full time or two years part time with funding secured under HCI Pillar 1 and subsequently self-funded from fees. First entry is September 2021. Delivery will be *via* traditional face-to-face lectures enhanced by blended and online modules.

The course will have close links with industry partners as its deals with the issues of management and sustainability of finite resources. As it requires innovation and cross-disciplinary engagement, discussions have been undertaken with colleagues in Chemistry, Geology, Physics, Civil, Structural and Environmental Engineering. Clear alignment with College strategic plan, E3 and national and global priorities is underpinning the curriculum. The proposed course complements but is distinct from the existing MSc Energy Science, Pg Dip in Environmental Monitoring, Assessment and Engineering and MSc/Pg Dip in Sustainable Energy and will contribute to the portfolio of courses on Environment, Materials and Energy. The proposed course director conducted discussions with the teams of existing courses to ensure differentiation in recruitment.

In terms of the course structure one of the proposed eight 5 ECTS modules is existing while the others are new. There is also a boarder project module of 20 ECTS. Pass mark is at 50%. Supplemental assessment is permitted, but marks are capped at 50%. Success on Year 1 is a prerequisite for progression to Year 2 on the part time structure. The Dean raised two queries in relation to assessment and progression for Prof. Gounko to clarify.



When invited to speak, Prof. Gounko thanked the Dean for her presentation. With respect to assessment the query was why there is no differentiation of format and weighting between online and face to face modules (20-80 split between assignment and examination) which is at odds with the content provided in terms of how online modules are constructed. Prof. Gounko explained that the rationale for sticking with a 'traditional' format of assessment when the format of learning is so different in the modules comes from the current experience in the School. During the pandemic all modules, both UG and PG, have been delivered online and all examinations have also been online using the "traditional" problem-based open book exam methods which works very well for the School. With respect to the query on progression he corrected the queried paragraph as follows "Students who have a mark of less than 50% in any taught modules will be required to do supplemental examination of annual exams on failed components in August-September. However, students may compensate for one fail mark (between 40% and 49% only) in 8 taught modules (not in the project module) as long as the overall mark across all 8 modules is 50% or over and students have passed outright modules."

Action GS/20-21/040: Prof. Gounko to make the corrections in his course proposal as indicated.

A short discussion ensued. In response to a query Prof. Gounko clarified that he had experienced a difficulty to receive any response from the Trinity Online Services and therefore the School is planning to rely on its own resources to develop online modules. The Dean acknowledged that TOS is over-stretched and noted that the issue of TOS capacity had been brought for consideration by the HCI Logistics Steering Committee. The Dean cautioned about the potential challenges that can arise where online modules are created outside the TOS structure.

Given the aspiration expressed by Prof Gounko to develop a Masters level programme building from the PgDip presented, the Academic Secretary commented that reference should be made to how the issue of advanced entry to a Masters course for graduates from the proposed postgraduate diploma would be accommodated. Prof. Gounko undertook to make a statement to that effect in the proposal. The Academic Secretary also queried the role of industry in the development and assessment of the proposed course curriculum. Prof. Gounko clarified that he actively maintained broad contacts with industry partners. They are supportive of his course and will willingly accept students on projects and give guest lectures.

The Dean noted that the proposal was well received. There were no additional issues raised and the committee endorsed the proposal.

Decision GS/20-21/040: The committee endorsed the proposal for Council subject to implementing recommended changes and a favourable external review.

XX GS/20-21/041 A new strand proposal: MBA Flexible Executive

Members had an opportunity to review the new strand documentation in advance of the meeting. The Dean welcomed Prof. Eimear Nolan (prospective Course Director) and Prof. Mary-Lee Rhodes, DTLP from Trinity Business School. She provided a brief overview of the proposal in a short power-point presentation. She noted that the



proposed strand was at level 9 on the NFQ with a credit volume of 120 ECTS, leading to the same existing major awards as the parent MBA, to be delivered over two years part time. First entry is September 2021. Delivery will be blended predominantly via online modules (80%). The Strand shared the same structure, duration, assessment model, workload, admissions criteria, QA, course governance with the parent MBA. The key difference is its highly blended delivery aimed to enhance its flexibility of content delivery in an effort to recruit from a specific target market of executive applicants. The Strand has six new modules totalling 45 ECTS out of 120ECTS. In addition to ten compulsory and four elective modules, all worth 5 ECTS, there is a strategic company project (30 ECTS) and one other project related to Entrepreneurship & Scaling/Social Enterprise/ Independent Study (20 ECTS).

The Dean opened the floor for discussion which focused on the use of the VLE Canvas rather than Blackboard on the Strand and how integrated that was with the GDPR and College policies. Prof. Nolan clarified that she had been involved in piloting Canvas and can confirm that all College policies were followed and IT pre-approval permission for its use were obtained. The use of Canvas was actually being expanded in TBS going forward due to its better efficiency than Blackboard which is slower. The TBS uses Canvas Premium Support Package which ensures that direct immediate supports are available to staff and students 24/7/365. Drieam application works effectively with Canvas by integrating the training administration completely with the website and Canvas learning management system. Prof. Rhodes commented on a further query re marketing the Strand. She clarified that the new Strand will be advertised not as a separate online MBA but as a new component of the existing MBA targeting applicants requiring flexible learning arrangements.

The Dean noted that the Strand proposal was well received. In response to a query she noted that she was still to decide whether to send the proposal for an external review. There were no additional issues raised and the committee endorsed the proposal.

Decision GS/20-21/041: The committee recommended the proposal to Council subject to a favourable external review if appropriate.

XX GS/20-21/042 Process for module review for micro-credentialling

The Dean referred to her circulated memo, taken as read, outlining a process for reviewing module proposals offered for micro-credentialling (MC) and stand alone modules funded by the HCI Pillar 3. She reminded members that the HCI Pillar 3 funding commits Trinity to the development of MC capacity. Definitions of micro-credentials vary greatly. The proposed process is only a pilot which does not refer to approval of modules that are part of the already existing PGT programme but applies only to new entities under HCI Pillar 3 initiative. MC offerings can accumulate over time and lead towards some award and it is therefore imperative that all such entities are QA-ed. The Dean noted that the proposed process has been informed by many stakeholders from across College.

In response to a query the Dean explained that the architecture of MC is to be considered separately and that work is led by the Academic Secretary. Four Schools are in the pilot which aims to develop a policy on MC in Trinity. The pilot is about



bringing forward MC entities for approval to try out the best way to QA the offerings. The work in Trinity links in with the national effort on MC led on by the IUA which feeds then into the EU Commission work.

A sub-group to support the proposed approval process of offerings under HCI Pillar 3 initiative is required and the Dean was asking members to volunteer for it.

Decision GS/20-21/042: The committee recommended the MC approval proposal to Council.

Action GS/20-21/042: Members wishing to volunteer for the MC review working group to email the Dean.

GS/20-21/043 Remuneration of external staff participating in PhD committees

The Dean explained that the item arose from a query that had come in from the Department of Music and invited the DTLP from the School of Creative Arts to speak to the item. Prof. Scaife clarified that the Department of Music is small staff-wise and needs to bring in external experts to sit on thesis committees. The external staff are made adjunct and given that normally their commitment amounts to between 10 and 20 hours a year the feeling is that external experts should be paid for their work. The Dean asked members to share practices in their Schools in order to shed some light on the practice range in College. What transpired from members' feedback was that In the School of:

- (i) Dental Science thesis committees may only have an oversight role while direction of student work is managed by supervisors
- (ii) Psychology permanent staff can only be members of thesis committees so additional payment does not arise
- (iii) Medicine membership of thesis committee is voluntary but restricted to staff eligible to supervise so additional payment does not arise.

The Dean confirmed that thesis committees, mandatory in all Schools, can bring in expert staff from outside but supervision may only be carried out by approved academic staff in the School.

Action GS/20-21/043: Members to email details of thesis committee practices in their Schools to the Dean.

GS/20-21/044 An update from IUA/LERU

The Dean noted that Deans of Graduate Studies, members of the IUA, meet every few months to discuss sectoral issues. Work in recent months was focusing on updating the 2008 IUA publication on *Irish Universities' PhD Graduates' Skills* to be released shortly.

The Dean then referred to the HEA's request for updates from the IUA about practices in terms of teaching demands on PGR students across the sector. It is anticipated that over the coming weeks, Universities will be required by the HEA to provide clear data on the extent of teaching commitments of PGR students, and how this varies across funded/self-funded students and across disciplines. The Dean was therefore seeking members' input into how best to capture the information from across Trinity. Members were invited to share their initial feedback which indicated significant differences between the Schools:



- (i) Pharmacy: recently introduced a demonstrators' policy to ensure equitable distribution of hours and payment
- (ii) English: DTLP does not deal with TAs who are within the remit of Heads of Discipline
- (iii) Psychology: frequently, funding requires PGR students to focus on research and precludes them from teaching; government should liaise with Research Councils re the issue
- (iv) Computer Science and Statistics: differentiates between Demonstrators and TAs with higher responsibilities; PGR students' teaching is part of structured PhD; there is a high uptake by students; part time PGR students are frequently not in a position to engage with it; there is a designated coordinator to oversee the activity
- (v) Engineering: PGR students' teaching is managed by Heads of Discipline; Demonstrators and TAs are a grey area without currently clearly defined distinct roles
- (vi) Biochemistry and Immunology: PGR students' teaching is voluntary but paid for; School accepts that some students do not want to demonstrate
- (vii) Natural Sciences: PGR students' teaching is voluntary, paid and is managed by Heads of Discipline
- (viii) Mathematics: PGR teaching is voluntary but paid, and its extent depends on funding; TAs are overseen by UDTL
- (ix) GSU President: varied range of payment across Schools should be reviewed and unified; some Schools reduced the number of Demonstrators and TAs due to going online which reduced earning opportunities for PGR students; what is needed long term is more jobs for PGR students, better pay and safe working environment

There was agreement among members that teaching by PGR students is beneficial for their future careers and frequently a funding requirement but that there is visible variability across Schools in terms of payment and opportunities resulting from traditional practices imbedded over time in disciplines. A thorough review is therefore timely and should in time lead to best practice guidelines. The Dean offered to set up a small working group to work out how best to carry out a survey of the current practices and requested volunteers. In response to a query from the GSU President the Dean explained that the survey is an immediate means of capturing the situation to inform a long-term aim of improving the PGR students' teaching working conditions which will be considered under the PGT renewal project.

Action GS/20-21/044(i): Members to email the Dean to volunteer for a working group on PGR teaching survey.

Action GS/20-21/044(ii): Members to email Dean categories for PGR teaching survey.

Action GS/20-21/044(iii): Dean to compile a PGR teaching survey draft for consideration by GSC at a future meeting.

The Dean reminded members that the LERU Doctoral Summer School was postponed to August 2021 as a result of the pandemic. Dean expressed concern that the Summer School 2021 would still be online rather than F2F on campus. Should it be online the advantage would be an increased number of participants free of



charge. PhD students towards the end on their doctoral studies, can apply to participate in the Summer School. Normally, there is a large number of applications for a small number of available places. The School is a week-long, and key notes will be streamed. Participants will work together around a designated theme of *the Role of the Expert*. It is likely that the deliverable will be a policy statement on the role of the expert, potentially to be submitted for consideration as a policy paper by LERU. The Dean was asking members to spread the news of the Summer School and energise students to get engaged. The Dean undertook to update members at future meetings with further developments.

Action GS/20-21/044(iv): Members to disseminate information on LERU Doctoral Summer School 2021 to supervisors and PGR students in their Schools.

GS/20-21/045 Process for suspension of PGT courses

The Dean reminded members that suspension of PGT courses needed to be undertaken in line with the existing policy (circulated) in order to ensure that the AR removes online application links and suspended courses are not advertised for recruitment. There should be a marketing *proviso* on each course to advise applicants that the course will not run should it not reach the pre-determined minimum number of applicants – this will enable the School to close the course even after applicants have been recruited to it. The Dean confirmed that if students are already registered the course may not be suspended.

GS/20-21/046 Non-Resident/Distance PhD

The Dean clarified that the proper term approved for usage in Trinity by Council for distance PhD is “Non-Resident PhD”. There is a pilot in place and Schools in the pilot would be getting communication from the AR with instruction how to recruit applicants to Non-Resident PhD. Each School will be given a hidden link which they will only disclose to applicants specifically interested in applying for Non-Resident PhD. This is to preclude an accidental application or acceptance without a School pre-approval. The Dean also explained that it is very difficult to shift a student from Non-Resident PhD to the standard register at the application stage but virtually impossible once the student has registered. Applicants from within Ireland can also apply for Non-Resident PhD, but they would need to be advised that they will not be eligible for funding and awards.

The DTLP from the School of Nursing and Midwifery raised concerns about the requirement for an additional 10 ECTS credits for non-resident students. She noted that there are not sufficient modules available at College level. Many of those currently available require negotiation with Module Coordinators. The timings are often non-flexible, and the number of online offerings is limited. The requirement for an extra 10 ECTS credit places therefore an extra burden on the students who may be ultimately forced to take modules ‘for the sake of it’ rather than avail of those that might suit better. The School has a small number of online modules that could be offered but these are very specific to particular topics and not relevant to the majority of students. The School has some modules that could be developed over time as part of the micro credentialing project. The DTLP also noted that the current system of accumulating ECTS credits for these modules is manual. The Dean noted that as the proposal for the Non-Resident PhD was approved by Council on the basis of 20



ECTS of taught components, it would not be possible to reduce that threshold during the pilot phase.

GS/20-21/047 COVID-19 & update from COLSAG/Recording Guidelines

The Dean reminded members that the circulated *Guidelines on Recording Lectures*, were developed over the past few weeks by a working group with broad membership. She asked for members' support in circulating the guidelines and encouraging staff to record their live lectures and make them available to students in order to support their learning. She also explained that an updated final version of the guidelines will be circulated to members after the meeting. The link to FAQs is currently active. She noted the wide range of resources already in existence to enhance teaching and learning in the online environment. The Vice Provost is working with IT Services to deliver a single portal where all resources related to online teaching and learning will be accessible to staff and students. The Dean asked members to circulate the Recording guidelines to staff and students including TAs and Demonstrators. A query was raised whether hybrid-delivered lectures could be recorded. The Dean noted that the guidelines specifically reference lectures, but encouraged members to record all teaching events where that is appropriate and possible. Hybrid-delivered lectures may be recorded, particularly to support student who for Covid-related reasons cannot be physically present. Such recordings are most easily done if the teaching is delivered in a College teaching space.

Action GS/20-21/047: Members to disseminate final recording guidelines (to be circulated after the meeting) to all teaching staff, supervisors and PGR students in their Schools.

GS/20-21/048 PG renewal update

The Dean will update on this project at forthcoming meetings.

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GS/20-21/049 AOB

- (i) The Dean alerted members to forthcoming supervisors' workshops and asked them to email her suggestions if there are any specific topics they would like to add to the existing programme, or for future workshops.

Action GS/20-21/049(i): Members to email the Dean suggestions of topics for supervisors' workshops.

- (ii) The Dean reminded members that the HCI Pillar 3 course proposals were in preparation and a large volume should come to GSC meetings in February and March. The proposals require the same level of consideration as other programmes which will be equally time-consuming. She put it to members whether (a) they would prefer extending the meeting duration in February and March; or (b) to schedule a separate meeting after lunch on the same day; or (c) to have separate circulation of HCI P3 proposals aiming to provide a little more time for GSC members to review these proposals at an additional meeting to be scheduled between the scheduled February and March meetings. She noted that the work for the GSC is not only within the meetings, but also in reviewing the documentation associated with each proposal. In an informal show of hands, preference was expressed for a mid-point additional meeting. She asked members for alternative suggestions.



Action GS/20-21/049(ii): Members to confirm which scenario for GSC dealing with HCI P3 course proposals they prefer by responding to a poll issued from the genadgso account.

- (iii) A query arose whether courts of examiners could be moved from the end of May to the first two weeks of June as a result of Covid-related delays. The Dean advised that a decision should be forthcoming soon and noted the implications of delaying meetings in terms of schedules for Courts of Appeal.
- (iv) In response to a query the Dean advised that late submission of PhD Transfer/Confirmation reports would be allowed for Covid-impacted students but noted that the confirmation process would need to be completed within six months of Year 3 for fulltime students.
- (v) The GSU President noted that in a recent PG survey a significant frustration was expressed by students about the quality of their learning experience. The GSU is therefore lobbying for partial refund of PG fees. Members noted that they were aware of PG students' dissatisfaction with their learning experience and the Dean confirmed that it also came her way. She stated that reduction of fees is a sectoral issue as costs to the University did not change during the pandemic.
- (vi) In response to a query from the DTLP from the School of Dental Science, the Dean reconfirmed that only submission of an electronic version of the thesis is required during the pandemic as it is acknowledged that submission of both the electronic version and the hard copy might not be possible in the same time frame.

XX Section B for noting and approval

GS/20-21/050 Additional intake in March 2021 on PG Cert in Innovation and Enterprise Development (PCIA-IEDE-1F)

The committee noted a memorandum from Dr Daniel Rogers, Head of Education – (Tangent) dated 18/11/20 seeking endorsement by the GSC for an additional once-off intake of the Postgraduate Certificate in Innovation and Enterprise Development (PCIA-IEDE-1F) for 40 students in March 2021. The finance for this additional intake has been pre-approved by the HEA under the Springboard+ initiative.

Decision GS/20-21/050: The committee endorsed the proposal to Council.

GS/20-21/051 Changes to Higher Diploma in Children's Nursing (PGNM-CNUR-1F) and Calendar changes from 2021/22

The committee noted a request for changes to the Higher Diploma in Children's Nursing from Prof. Fiona Timmins, Director of Teaching and Learning in the School of Nursing and Midwifery dated 17/12/20. The proposed amendments to the course have been necessitated by the publication of the Nursing and Midwifery Board Children's Nurse Post-Registration Education Programmes Standards and Requirements (2nd Edition, 2018). The overall curriculum design, title, philosophy and teaching methods are unchanged. However, the content and sequencing of



modules have been revised to ensure that they meet the requirements set out by NMBI (2018). The course title of the Higher Diploma in Children's Nursing is retained, there is continuation of the course learning outcomes which remain essentially unchanged but with different syntactic presentation to explicitly meet the Children's Nurse Post-Registration Education Programmes Standards and Requirements (2nd Edition, July 2018).

Decision GS/20-21/051: The committee endorsed the requested structural changes to the course required by the revision by the Nursing and Midwifery Board of Ireland of the Standards and Requirements for the Midwife Registration Education Post-RGN Programme (NMBI 2018), and the resulting Calendar change for 2021/22. The committee agreed to recommend the proposal to Council.

GS/20-21/052 Proposal for revised admissions criteria for graduates from Chinese Universities

The committee noted a submission from Prof. Juliette Hussey, Vice-President for Global Relations, dated 26/11/20 seeking endorsement, as recommended by the Admissions Group, by the GSC for the proposed revision of admissions criteria for applicants to Masters courses in Trinity presenting degrees from Chinese universities. Current admission criteria for holders of Bachelor's degrees from Chinese universities make no distinction as to the quality of the awarding institution, unlike the practice amongst peer universities, where the category of the awarding university is taken into consideration. The proposal included benchmarking to that effect, and set out a rubric by which Trinity would begin to consider the category of the Chinese awarding body in assessing applications for Masters programmes on the understanding that academic units will have the freedom to apply higher requirements. Included in the proposal was Trinity Business School's operating criteria for Chinese degrees.

Decision GS/20-21/052: The committee endorsed the proposal to Council.

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Section C for noting

There were no agenda items for Section C to note.

There being no other business, the meeting ended at 12.10pm.

Prof. Martine Smith

Date: 28 January 2021