

## **Unit of Assessment 12 - Engineering Criteria and Working Methods**

### **UoA Committees and Operations**

The work of UoA Committees collectively and the work undertaken by individual members of the Committee will need to be conducted in accordance with the University's REF Code of Practice and with the UoA Criteria and Working Methods.

#### **Role of the UoA Chair**

The UoA Chair will be responsible for preparing all aspects of the UoA REF return, including:

- the identification of eligible staff, including those from Colleges and related institutes, to be submitted
- the selection of research outputs
- the development and completion of all UoA impact case studies
- the review and approval of all REF data provided by the centre such as numbers of PhD students, research income, research income-in-kind and staff employment data
- the provision and verification of the accuracy of all elements of the UoA submission

The final form of the return will be agreed in consultation with the Heads of School and the Pro-Vice Chancellor for Research.

1. In fulfilling these responsibilities, the UoA Chair will report to the Heads of the relevant Schools and work closely with the central REF Office to ensure the completeness, timeliness, accuracy and quality of the UoA submission. During the submission, the UoA Chair will ensure that the UoA complies with the University's REF Code of Practice.
2. The UoA Chair will be expected to provide (with the support of the UoA Administrator) frequent and timely information to the REF Office on the status of the UoA submission and on any issues that may affect the quality or timeliness of the UoA submission. The requirement to provide this information will be driven by the University's REF timetable, by such regular reporting cycles as may be established and by factors outside these frameworks as required.
3. Schools, Faculties, Departments, Institutes, individual researchers and the University's REF Office will provide the UoA Chair with information that may reasonably be required for the REF return within a reasonable timescale. This information includes, for example, contractual information relevant to the REF eligibility of individual staff members, details of their research outputs and of impact created. The UoA Chair is entitled to seek the opinions of experts internal or external to the University on the quality of research outputs, in accordance with the Code of Practice.

#### **Role of the UoA Committee**

4. The role of the UoA Committee is to support the Chair in making the best possible REF submission in accordance with the University's REF Timetable, and to comply with the University's REF Code of Practice, including its equality and diversity aspects, and to meet the appropriate balance between quality and quantity as determined by University policy.

5. Membership:

- a. The Committee membership should include a nominated Deputy Chair who will lead meetings in the absence of the UoA chair and act as his/her formal Deputy as required.
- b. The size of the Committee should be appropriate to its workload, which in turn will depend on the size of the UoA. It is recommended that Committees should have between four and ten members, including the Chair and Deputy Chair, unless there are particular reasons (such as the unusual size of the UoA) which make it desirable to have a larger committee.
- c. Committee membership should reflect the subject diversity of the UoA concerned, for example reflecting the research group structure of the planned submission where it applies.
- d. A nominated Committee lead should be identified for (i) outputs & open access, (ii) research impact; (iii) research environment; (iv) equality & diversity. Where appropriate, the leadership for these responsibilities could rest with the UoA Chair or Deputy Chair.
- e. It is recommended that the membership of Committee should draw upon relevant members of the University's REF Advisory Group. Committee membership should also include cross-representation with the relevant Schools REF Working Group.
- f. One of the two Academic Leads for the relevant Main Panel should be invited to attend Committee meetings in an *ex officio* capacity. The relevant Heads of School may also be invited to attend as required.
- g. The Committee will be supported by an identified UoA Administrator appointed by the relevant Schools. Members of the central REF team will also be available to support the work of the Committee for specific tasks (e.g. review of Impact Case Studies). It is suggested that the REF Manager and relevant REF Impact Coordinator are invited to attend Committee meetings as required.
- h. UoA committees wishing to appoint external members or advisors to their REF Committees must ensure that external members sign the University of Cambridge REF Confidential Disclosure Agreement (REF CDA). The REF CDA should then be countersigned by the authorised signatory. Authorised signatories are nominated by the Schools and given delegated authority by the REF team. The fully executed REF CDA should be kept locally and a copy sent to the REF2021 team.

6. In order to meet the requirements of the REF Timetable, Committees should meet on at least a twice termly basis for the 2018/19 academic year.
7. The frequency of meetings in the period September 2019 – November 2020 should be set as required to ensure that internal deadlines for the completion of the UoA submission can be met.
8. It is recommended that meetings will typically require 1-2 hours but that sufficient time is set aside to complete the business of a particular meeting, for example review of outputs or impact case studies.

9. Where a UoA committee member is absent for at least three consecutive meetings, or is unable to attend for at least a term due to leave arrangements, the Chair shall consult the Chair of the Faculty Board or Head of Department concerned to identify a replacement member with the necessary expertise.
10. Questions about whether the work of an individual member of staff falls within this Unit of Assessment will be settled in accordance with the recommendations set out in the Code of Practice para 17. In the first instance, the Chairs of the Unit of Assessment Committees concerned will discuss the matter, in consultation with the member of staff. If agreement cannot be reached, the matter will be referred to the Head(s) of School(s) concerned for guidance. The final decision rests with the PVC-R.
11. The REF is not considered by the University to be an effective or appropriate mechanism for the assessment of the performance of individual staff members. There is therefore no expectation beyond the minimum requirements set by Research England of an individual's contribution to the UoA submission. Accordingly, collective academic judgement must determine the optimal presentation of the University's research capabilities for REF purposes and no eligible staff member has an inherent right to determine their specific contribution to the UoA submission. Equally, no eligible researcher has the right to refuse to be included in the University's return.
12. The protection of staff data is paramount and members of UoA Committees will be required to give an undertaking that they will make every effort to prevent unauthorised or accidental access to, or disclosure of, personal information. Research England Guidance on Submissions sets out the personal data that the University must supply to verify staff eligibility for inclusion. In the University's case, this information will be extracted from the University's HR and payroll system and held within a secure University REF database to underpin each person's research output details. In the case of College staff, information will be provided by the Office of Intercollegiate Services and held within the same secure systems.

## Equality and Diversity

13. All Committee members will familiarise themselves with the University's Code of Practice for the REF, which sets out processes for the fair and transparent identification of staff across the collegiate University with significant responsibility for research; for determining who is an independent researcher; and for the selection of outputs. The Code will apply to all University staff who are eligible for the REF (and throughout this document, the phrase 'University staff' will mean eligible University employees and eligible College employees, on an equal basis). The Code of Practice obliges Committee members to undergo training in equality and diversity before beginning the process of staff identification and output selection.

## Conduct of business

14. The quorum for the conduct of business at a meeting shall be **X** members.

15. The Committee has discretion under the Code of Practice to conduct any item of business by circulation, with the exception of decisions on the eligibility of staff.
16. Delegation: The Committee may delegate particular decisions to its Chair or another designated member, or to a sub-committee, but it may not delegate decisions on the eligibility of staff, the determination of the quality of an output, the selection of an output for inclusion of the pool of outputs, or the approval or amendment of these criteria and working methods.

### Conflicts of interest

17. In the event that a member of a Committee believes that they might have a conflict of interest in the assessment of a particular output or the identification of a particular member of staff as an independent researcher, this must be declared immediately to the Chair of the Committee and they should take no further part in decisions relating to these matters.

If the Chair of a Committee believes that they have such a conflict of interest then they must declare it to the Committee and take no part in the decision. The Committee may appoint another member to act as Chair during the consideration of the matter in question.

The Chair (or UoA Administrator) will keep a confidential register of conflicts of interest declared and the action taken.

Examples of conflicts of interest include the consideration of an output of which the Committee member is a co-author, or where the selection process involves a member of staff with whom a Committee member has a personal relationship.

## Staff identification and Output Selection

### 18. Significant Responsibility for independent research

#### **(a) Senior Research Associates, Principal Research Associates and Junior Research Fellow**

In line with University Code of Practice, paragraph 21, in this UoA, University employees holding posts of Senior Research Associate or Principal Research Associate, Independent Research Fellows (Appendix C) and college employees holding the post of College Research Fellow or Junior Research Fellow will normally be considered to have significant responsibility. However, where a question is raised regarding significant responsibility, the UoA will follow the procedures listed below.

#### **(b) Postdoctoral Research Associates and College Teaching Officers**

Staff holding the post of College Teaching Officer will normally be assessed by UoA Committees individually according to the criteria below in order to determine significant responsibility for independent research and substantive connection to the UoA. Postdoctoral Research Associates will normally not be considered to be independent researchers in UoA12 and will not normally be assessed

In the case of exceptions to (a) or (b) above, where a question is raised by the UoA Committee or by an individual staff member, the UoA Committee will assess the staff member against the criteria as per Code of Practice paragraphs 25 – 30 in order to determine significant responsibility for independent research and substantive connection to the UoA. In UoA 12, Senior Research Associates whose principal duties involve the support of knowledge transfer, project management (rather than project leadership), management of sponsor relationships, or the preparation of research proposals under the direction of an independent researcher, will not be considered to be independent researchers. Postdoctoral Research Associates will normally not be considered to be independent researchers in UoA12.

19. The Indicators of research independence applied by all UoA are consistent with the general principles as set out in the REF2021 guidance as follows:

#### **All Panels**

- a. leading or acting as principal investigator or equivalent on a significant externally funded research project from a major funder.
- b. holding an independently won, competitively awarded fellowship where research independence is a requirement. A list of fellowships is included as Appendix C.
- c. making an exceptional contribution to leading a research group or a substantial or specialised work package.

20. As per Code of Practice paragraph 28, normally staff who fulfil more than one of the criteria will be considered to be independent researchers.

21. The UoA Committee will take into account any requirements of the role which may prevent a staff member who would otherwise be considered to have significant responsibility for independent research, such as:

- a. long-term and significant administrative responsibilities.

- b. primary responsibility for managing a significant departmental facility.
- c. primary responsibility for managing a research laboratory.

**22. Substantive connection to the UoA**

The UoA Committee will balance the following factors to establish a verifiable connection to the UoA:

- a. evidence of participation in and contribution to the unit's research environment, such as involvement in research centres or clusters, research leadership activities, supervision of research staff, or supervision of postgraduate research (PGR) students
- b. evidence of wider involvement in the institution, for example through teaching, knowledge exchange, administrative, and/or governance roles and responsibilities
- c. evidence of research activity focused in the institution (such as through publication affiliation, shared grant applications or grants held with the HEI)
- d. period of time with the institution (including prospective time, as indicated through length of contract).
- e. through the permitted routine use of facilities (office space, labs, etc), invitations to meetings where matters primarily affecting independent researchers are discussed, active participation as a PI in grant submission processes, publication addresses, etc.

**23. Fair application of criteria**

In order to ensure the criteria above are applied in a fair, consistent and transparent manner with due consideration of the duty to prevent discrimination, eliminate bias and promote equality. the UoA will follow these procedures, as per paragraph 30 & 31 of the Code of Practice, which states :

- Lists of Category A eligible staff derived from HESA returns and the College Survey will be supplied to UoA by the REF Office
- E&D data will be generated from initial lists and held centrally for E&D to conduct Equality Impact Assessment of procedures for staff identification.
- UoA Committees will review staff lists against the criteria above and in the Code of Practice.
- After the Submission Review meetings in the Michaelmas Term 2019, UoA will notify all Teaching and Research and Research Only staff of their eligibility or otherwise, providing the eligibility criteria and an explanation of their right to request a review of the decision.
- Where a review is requested, the UoA Chair will acknowledge receipt of the request within ten working days and convene a meeting of the UoA Committee within one calendar month of the receipt of the request. The Chair, having consulted the member of staff, will be responsible for ensuring that the Committee receives before the meeting

all the information that they consider necessary to support the review. Unless there are exceptional reasons that prevent this, the UoA Committee's decision must be conveyed to the individual staff member in writing within ten working days of the meeting at which the review is considered.

- Where language or any other barrier may affect communication, a staff member may nominate a representative to help them through the process.
- Following a review, staff will be notified promptly of the decision and the criteria against which the decision has been taken.
- The staff member may appeal further and finally to the REF Appeals Committee as per paragraphs 42-47.
- UoA Committees will keep auditable records of decisions taken and their justification against the criteria. Copies of relevant minutes documenting the selection process must be submitted to the REF Office for audit purposes.

### **Staff Circumstances**

24. The Code of Practice, paragraphs 33 - 41, sets out the process for staff voluntarily to declare equality-related circumstances that may have affected their research productivity during the period. The process will be managed centrally by the REF office and outcomes that affect possible requests for output reduction relayed anonymously to relevant UoA. No member of staff will be placed under pressure to declare their circumstances if they do not wish to do so. A confidential contact from the central committee will be available to staff who wish to raise any concerns about staff circumstances.
25. University policy in the Code of Practice (paragraph 41) is that requests for output reductions for special circumstances, including reduction for ECRs should be limited to those UoA where the cumulative effect of any required reduction is greater than 20% of their required output profile.

### **Selection of Outputs**

26. The UoA will follow the process below for the review and selection of outputs ensuring compliance with the principles outlined in the Code of Practice paragraphs 49 – 51 as detailed below. UoA Committee must detail their review and selection process below and the results of the review must be recorded in Symplectic Elements.

UoA Committees will operate a two-stage process for output selection which will include as the first stage an opportunity for staff to nominate their best outputs and a second stage of peer review by the Committee, advised as required by expert colleagues.

- Stage 1: in order to ensure compliance with the principles of equality and diversity, self-nomination of outputs should be conducted by each UoA in the REF Assessment module Symplectic Elements.
- Stage 2: UoA Committees may also seek internal or external advice to provide quality assurance of (i) the rigour of the selection process and (ii) that the selection of outputs is consistent with the key principles of transparency, consistency, accountability and inclusivity.

- The UoA Committee will base its quality assessments and criteria on the criteria and definitions published by Research England.
- Where the UoA Committee believes research quality of outputs could be improved by including eligible outputs of staff who are no longer associated with the UoA, these outputs will be peer reviewed in accordance with the above procedure.
- Final output selection will be based on research quality.

### Assessment of research outputs

27. All Committee members will participate in the review of the research outputs put forward for possible inclusion in the REF submission and will score each output for its research excellence in accordance with the following Research England scale:

**Table A2: Outputs sub-profile: Criteria and definitions of starred levels**

The criteria for assessing the quality of outputs are ‘originality, significance and rigour’.	
Four star	Quality that is world-leading in terms of originality, significance and rigour.
Three star	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.
Two star	Quality that is recognised internationally in terms of originality, significance and rigour.
One star	Quality that is recognised nationally in terms of originality, significance and rigour.
Unclassified	Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purposes of this assessment.

### 28. Impact

It is for the Committee to determine the impact case studies which will be included in the REF submission and to prepare the impact template.

**Table A3: Impact sub-profile: Criteria and definitions of starred levels**



The criteria for assessing impacts are ‘reach’ and ‘significance’:

- In assessing the impact described within a case study, the panel will form an overall view about its ‘reach and significance’ taken as a whole, rather than assess ‘reach and significance’ separately.

Four star	Outstanding impacts in terms of their reach and significance.
Three star	Very considerable impacts in terms of their reach and significance.
Two star	Considerable impacts in terms of their reach and significance.
One star	Recognised but modest impacts in terms of their reach and significance.
Unclassified	The impact is of little or no reach and significance; or the impact was not eligible; or the impact was not underpinned by excellent research produced by the submitted unit.

29. The Committee will submit those research impact case studies which, in its opinion, are the strongest. The impact element of the submission covers the Unit of Assessment as a whole and attempting to submit a broad range of different impacts will not, in itself, strengthen the submission.

### 30. Environment

It is for the Committee to prepare the environment template. The required data on PhD completions and research grant expenditure will be prepared centrally and circulated to UoA according to the timetable.