

Notes for guidance for Graduate Statistician (GradStat) applicants

Graduate Statistician (GradStat) is a grade of professional membership of the Society. It provides formal recognition of a member's statistical qualifications.

The criteria for GradStat are the same as the academic criteria for the standard route to Chartered Statistician (CStat) status.

If you are not sure whether your qualifications fulfil the criteria, we would advise you to complete a mapping grid that allows you to provide detail as to how you feel the modules taken meet the full criteria listed below:

Criteria for GradStat status

To fulfil the requirements for GradStat:

Graduates have a good knowledge of

- **the frequentist and Bayesian methods for conducting data analyses**
 - Programmes are free to concentrate on either approach, so long as students are given a secure grounding in both.
- **their logical foundations, including relevant probability theory**
 - Programmes must give students a secure knowledge of the mathematical foundations of statistics. However, this should always be within some context of application: proficiency in mathematics without a good understanding of its implications is insufficient. Similarly, proficiency in the practical application of statistics must be underpinned by a robust knowledge of the mathematical foundations.
- **the principles of systematic data collection, management and curation**
 - Data now has many different sources. 'Found' administrative or transactional data is increasingly important, as well as data that is the product of a specific research design. This means that as well as knowledge of the principles and practice of experimental research design, and sampling, graduates require some experience in the preparation of data for analysis, including matching data from different sources and also require an understanding of the implications of data quality for subsequent analysis, and the need where appropriate to produce reproducible knowledge.

They can use this knowledge, together with software and programming skills, to

- **build, assess and refine models appropriate for describing and understanding a wide variety of processes or problems**
 - Students should be able to marry their knowledge of the logical foundations of statistics with proficiency in using software to put statistical theory into practice. They should be able to evaluate the strengths and weaknesses of alternative approaches and appreciate that there may not always be one single 'best' solution. This includes being able to identify how statistics may address problems posed in non-statistical terms.
- **draw appropriate inferences from them**
 - Students should be able to use their statistical expertise both to draw conclusions and describe the degree of uncertainty associated with these conclusions, and the assumptions made in reaching them.
- **effectively communicate both substantive results and the nature of the uncertainty inherent in them, to expert or lay audiences.**
 - Statistical expertise that cannot be effectively communicated to others is of limited value. Students should be able to match the degree of technical complexity in the presentation of results to the level of understanding of their target audience. They should also be aware of, and able to communicate, the limitations of the conclusions they reach.

They are aware of the implications of their work for the rights of individuals, are trustworthy, maintain the highest ethical standards and work for the public good.

Ethics encompasses more than data security and protection. As the volume and complexity of data collected on individuals grows, students must be aware of the importance and nature of informed consent. They should understand the importance of the integrity of their work not only for the reputation of the statistics profession but for public trust in the value of evidence, and its use for their benefit.

In addition to the above, qualifications must be:

1.
 - a. a UK Bachelors degree of classification 2:2 honours or better (or equivalent under UK NARIC) that was, at time of award, on the list of the Society's accredited degrees. Holders of a non-accredited UK Bachelors degree programme must have completed a combination of modules that successfully meet the Society's standard for a Graduate Statistician as set out above [to be evidenced by a copy of the transcript and degree certificate];
 - OR
 - b. a UK Masters level degree of classification pass or better (or equivalent under UK NARIC) that was, at time of award, on the list of the Society's accredited degrees. Holders of a non-accredited UK Masters level degree programme must have completed a combination of modules that successfully meet the Society's standard for a Graduate Statistician

as set out above. [to be evidenced by a copy of the transcript and degree certificate];

OR

- c. more than one degree at UK Bachelors, Masters and/or Doctoral level (or equivalent under UK NARIC) of classification as given in 2 a. and/or 2 b. The degrees must in combination successfully meet the Society's standard for a Graduate Statistician as out above [to be evidenced by copies of transcripts, degree certificates, module / unit descriptions including learning outcomes and candidate's dissertation / research project (or equivalent)];

3.

The Society's Graduate Diploma [this award can be verified from the Society's records]. Exceptionally, where an applicant has partially completed the Graduate Diploma but does not hold the award, they may submit evidence of further study that successfully meet the Society's standard for a Graduate Statistician as set out above. [to be evidenced by a copy of module/unit descriptions and award letters for any further study].

For UK undergraduate Honours Degrees (including enhanced undergraduate degrees of the MMath type), the content must meet the Society's standard for a Graduate Statistician as set out above. Joint degrees in Statistics and/or with other subjects or those with a high content of statistics-based modules, where the high-level statistics content is substantial, might also qualify.

For UK taught Masters degrees (usually MSc), the content must successfully meet the Society's standard for a Graduate Statistician as set out above.

For overseas degrees, a broad equivalence with UK degrees as set out above is required. The Society is normally guided by UK NARIC (the National Recognition Information Centre for the United Kingdom) in assessing the level of overseas degrees. In some cases, the level of MSc is a necessary requirement.

For research degrees, whether at Masters level (often called MPhil) or at Doctors level (PhD), it will be necessary for an applicant to demonstrate a breadth of study as well as the depth that is inherent in research work which successfully must meet the Society's standard for a Graduate Statistician as set out above. This might for example be achieved by taking some taught courses alongside the research work, or it might be implicit in an undergraduate degree obtained previously.

Assessment process for GradStat applications

All applications are considered by members of the Professional Affairs Committee (PAC). The Committee may defer the case, pending receipt of additional information and the RSS office will contact the applicant to request this. Applicants who do not fulfil the criteria but appear to have suitable professional training and experience may be advised to apply for CStat status via the competence based route.

The RSS office is happy to liaise with applicants individually to help them determine which route is most suitable based on their individual circumstances.

May 2020

