

## Annex IV: Guidelines on Undergraduate Research

The SLQF stipulates that an undergraduate, reading for a degree at Level 6, should complete a research component equivalent to a total of at least 6 credits of SLQF level 6.

This document is to provide with broad guidelines to interpret the term 'research component'. The said research component should comply with the following guidelines.

1. Formal teaching of the key underpinnings of research; e.g. what is research, developing a research question, how to conduct a literature review, study designs, data collection tools, data analysis, research ethics, how to write a research report or a journal article. This teaching could be delivered in the form of lectures, workshops, seminars, etc.
2. Conducting a research project. This project could vary from a formal academic research, applied research, design-based research or creative writing, depending on discipline of study and logistical circumstances.
3. Due to logistical circumstances, if students are required to conduct group research, then the maximum group size should not be more than 4 to 5 students per group. Even if group research is conducted, each student in the group should have contributed to the research project, work equivalent to not less than 6 credits, individually. Hence, the extent of the research project should reflect the group size.
4. The extent of work required in the research project could be partly determined by the number of students within a research group. Table 1 provides an approximate guide to determining the extent of the research project, in terms of the group size.

**Table 1 – Guidelines on the extent of the research project, supervision and examination**

Number of students in the group	Approximate minimum requirements for the research project
5 students	A research study that includes a research report comprising chapters on introduction, literature review, methods, results, discussion and conclusions with recommendations. The report should be collectively prepared by all students. Additionally, this work should result in a formal publication in at least a peer-reviewed local (i.e. university- or faculty based), student journal. Each student should be individually assessed at an oral examination based on the research report and publication that they co-authored. The report and the publication should be read by an examiner other than the supervisor, before the oral examination. Marks for both the oral examination and research report should be awarded based on a pre-agreed marking scheme.
4 students	A research study that includes a research report comprising chapters on introduction, literature review, methods, results, discussion and conclusions with recommendations. The report should be collectively prepared by all students. The report should be read by an examiner other than the supervisor and marks should be awarded, based on a pre-agreed marking scheme. Additionally, this work should be followed by a formal 25 to 20-minute presentation by the group, where each student presents a part of the research. This presentation should carry marks for each student, based on a pre-agreed marking scheme, following oral questioning of each student by the examiner/s at the end of the presentation.
2-3 students	A research study that includes a research report comprising chapters on introduction, literature review, methods, results, discussion and

	conclusions with recommendations. The report should be collectively prepared by all students. The report should be read by an examiner other than the supervisor and marks should be awarded based on a pre-agreed marking scheme. Additionally, each student should be individually assessed at an oral examination, based on the pre-marked research report. The oral examination should be guided by a pre-agreed marking scheme.
1 student	A research study that includes a research report comprising chapters on introduction, literature review, methods, results, discussion and conclusions with recommendations. An oral examination is not a must but could be employed, especially in the case of borderline candidates; i.e. candidates whose performance is neither totally unsatisfactory nor satisfactory. The report should be read by an examiner other than the supervisor and marks should be awarded based on a pre-agreed marking scheme. Where an oral examination is employed, it should be based on the pre-marked research report, using a pre-agreed marking scheme.

Note: Please note that the above are minimum standards. Hence, there is nothing preventing an examination board applying higher standards than the above.

5. An individual, face-to-face supervisor is a must for each research project. All supervisors should be full-time academic staff (preferably Senior Lecturer and above but could be Lecturer and above in extreme circumstances) or persons with equivalent qualifications to full-time academic staff (Senior Lecturer and above). One supervisor should not supervise more than 2-3 research projects of the same undergraduate batch at the same time. If more research projects have to be supervised by the same supervisor, then the supervisor should be supported by other supporting academic/research staff; e.g. demonstrators, postgraduate researchers, assistant lecturers, etc.
6. All examiners should be full-time academic staff (preferably Senior Lecturer and above but could be Lecturer and above in extreme circumstances) or persons with equivalent qualifications to full-time academic staff (Senior Lecturer and above).

The above guidelines should be considered only as 'rules of thumb'. Deviation from the above would be possible, but only after proper justification based on the requirements of the discipline, logistical circumstances and international best practices.

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## Types of Research Projects

**Four types of significant research projects** extracted from:

<http://www.woodson.virginia.edu/>

Each type of undergraduate research project typically involves students working closely with a mentor, either a faculty member or an advanced graduate student.

1. In an **academic research project**, a student will:

- Form a research question based upon the relevant literature and/or observations.
- Collect pertinent data/information.
- Analyze data/information.
- Draw logical and defensible conclusions.
- Communicate clearly and effectively findings and conclusions.
- Defend the research to a critical audience.

2. In an **applied research project**, a student will:

- Identify a problem to be solved, or need to be addressed, based upon existing information.
- Collect pertinent data/information.
- Analyze data/information.
- Draw logical and defensible conclusions.
- Communicate clearly and effectively findings and conclusions.
- Defend the solution to a critical audience.

3. In a **design-based research project**, a student will:

- Define the problem and/or objectives.
- Identify prior designs or works from the literature.
- Generate concepts and design alternatives, establishing specifications.
- Model, analyze, test and evaluate conceptual designs.
- Create the design/work.
- Defend the design/work to a critical audience.

4. In a **creative research project**, a student will:

- Identify an aesthetic or creative conversation and a set of attendant questions inspired by that conversation (e.g. how might one write a series of original poems about familial incest?)
- Locate a gap or a problem within that conversation (e.g., how can such difficult, even transgressive material be approached in a manner that is not merely confessional and which is also artistically valid?)
- Gather data and inspiration from the relevant primary and secondary sources that will help address the specific gap or problem or question under consideration (e.g. read widely in confessional poetry and the literatures and literary critical treatments of incest; explore possible masks or personae to adopt from a range of mythologies and fables; read biographies, letters, and diaries by historical figures also concerned with similar material)
- Decide which method or combination of methods are most appropriate for embodying the student's own project (e.g. choose to create a series of related poems whose speakers are very clearly drawn from mythology – Adonis and his parents, for example – and use the borrowed narrative structure to explore anachronistic and personal concerns of the student poet).
- Perform an analysis of the data (e.g. seek feedback on the poetic sequence in peer workshop settings and from the faculty advisor for the project).
- Produce a final project of original creative work that has grown out of the accumulated research, reading, workshop response, and private stores of material (e.g. a creative thesis or collection of poems on this theme that would be evaluated by an orals or honors committee).

In addition to the above four types, in an **action research**, a student will:

- Know about action research as a cyclic process of inquiry and its purposes of undertaking in the field of education.
- Identify a problem to be studied in classroom teaching and learning by reflection.
- Collect data on the problem mainly through pre-tests, records of the performance in the classroom evaluation and careful observation of student engagement in the teaching learning process.
- Develop a plan to address the problem and implement the plan.
- Evaluate the results of the actions taken and Identify a new problem to be addressed while repeating the same cyclic process.

- Improve their ability to read, write, and act reflectively, critically and analytically as drawn from the interpretative perspective.
- Be aware of the importance and relevance of research ethics.