



Writing Your Research Proposal: *guidelines for a quality synthesis*

► **A research proposal** intends to present an idea or a question and its expected outcomes with clarity and in definite terms (known as the “**what?**”). It also should justify the reason(s) to pursue, the significance, and the value-added to the scientific domain/discipline as a result (known as the “**why?**”). It should also indicate the method(s) employed, the approach of the research, and the resources required to arrive at results (known as the “**how?**”) and also the potential timeframe it requires to do so (known as the “**when?**”). An important thing the research proposal should not attempt to do is to answer the research questions; that will be done by the research itself.

In summary, a research proposal could be considered as a *tool* that helps to clarify, plan, and execute an idea for scientific investigation efficiently and effectively.

► **Your research proposal** for IMAT Master Programme should be about **two to three A4 pages (content without cover page)** or up to **max. 2000 words (please do not exceed the upper limit)** (see the specifics below). It should be concise, technically/scientifically composed, free from any and all orthographical and typographical errors, and must include all the key domains of a research proposal as indicated below.

- **Specifics of the research proposal** given below must be adhered to.
- A. Paper size: A4, standard margin (1” on all sides)
 - B. Font: Times New Roman
 - C. Font size:
 - a. **Titles** – 12, 14, 16, etc. according to the needs of styling.
 - b. **Body** - 11
 - D. Line spacing & alignment: single spacing; justify
 - E. Columns: single

What is a **Research Proposal?**

Technical specifications for the composition of the research proposal.

Specifics of the layout, page formatting, and language, etc.



Writing Your Research Proposal: *guidelines for a quality synthesis*

F. Language & spelling convention: English; British or American spelling convention is accepted but not a mix of both.

► **The key domains** that must be included in the research proposal are:

*The **key domains** of the research proposal.*

- A. **Project Title:** must be concise and should indicate what your proposed research is about
- B. **Abstract:** should synoptically present what your research is about. Outline the key aspects of what you will analyze/investigate. And also, indicate the expected outcomes. The abstract should be about 100 words.
- C. **Aims/Objectives & Research Queries:** this should clearly indicate what you try to achieve with your research, the purpose, and/or if you're trying to address a gap in the existing research, etc. You must present the objectives and the research queries in clear and focused statements.

Should you have multiple objectives & research queries, list them out in clear steps in a logical order

- D. **Background:** must provide, concisely, context to your research (explain why you undertake the research) demonstrating your understanding of the current research domain related to your area of interest. You should base this upon a thorough literature review and show the evaluator that you understand what is currently being discussed about your topic and what has already been published. Must display that you have a strong understanding of the key topics, important studies, etc. in your area of research and how these have contributed to the current landscape.

NOTE: This section (D) is sometimes called the *Review of the Literature* or the *Literature Survey*. IMAT Master Programme



Writing Your Research Proposal: *guidelines for a quality synthesis*

requires you to adhere to the academic style review of literature and accepts peer-reviewed publications. You should avoid citing/referencing grey literature as much as possible. The style of citation and referencing accepted is the **American Psychological Association's** style (see: <https://apastyle.apa.org>). Citations without referencing and referencing without citations are not accepted.

- E. **Expected Outcome/Contribution:** your research proposal must be a statement of originality. Therefore, it should show what the outcome of your proposed research is contributing to. State clearly the contribution of the expected outcome on existing knowledge and how it will create a new understanding with innovation and originality to the domain of International Material Flow Management and Sustainability sciences.
- F. **Methods:** provide an overview of the methods (sometimes referred to as methodology) and techniques you will use to conduct your research. Indicate which materials and equipment you will employ, what theoretical frameworks will you draw on, which method will you use to collect data, etc.
- G. **Work Plan/Timeline:** indicate the feasibility of the completion of your research within the proposed timeframe and achieving the objectives. Clearly outline the tasks and expected time to complete them in order to achieve the objectives. You may follow a work breakdown structure and present your work plan using a simple *Gantt Chart*.
- H. **Resources:** indicate the resources you require to carry out the research. State what critical resources are required for the success. You should consider, if any, the equipment, laboratory work, fieldwork expenses, travel, etc.



Writing Your Research Proposal: *guidelines for a quality synthesis*

This should also include a proposed budget, which is important to give an indication of how realistic your research proposal is in terms of financial requirements and should indicate how you plan to finance the undertaking.

- I. **References/Bibliography:** must provide a list of references that you have made throughout your research proposal. Reference only what you have cited in the body. (see §D-NOTE).

► **Consult various online resources** in formulating your research proposal (i.e. sample research proposals from various higher educational institutions). However, your research proposal must **reflect originality** and adhere to the ethics of academic/technical writing. Plagiarism is an offence. Therefore, will be strictly checked and acted upon as required.

Advise on **originality** & **plagiarism**.

When you formulate the research proposal, you should consider the broad area of *sustainability sciences*, within which, the following specific domains (one or a combination of a few) maybe employed. It is also advised to not limit your focus on these domains and we expect you to use your creative thinking.

- A. Material Flow Management (MFM)
- B. Zero Emission Technologies and Strategies
- C. Circular Economy (CE)
- D. Bio-Economy (BE)
- E. Circular Bio-Economy (CBE)
- F. The Water-Energy-Resource Nexus (WEF)
- G. Sustainable Resource Management (SRM)
- H. Renewable Energy Systems (REN)
- I. Recycling & Upcycling
- J. Life Cycle Analysis & Life Cycle Management (LCA & LCM)