Hints and Tips

If you have reached this page, you are considering making an application to become a research student with the COATED M2A (Materials and Manufacturing Academy). Applying for a research scholarship is very similar to applying for a job. The application form is essentially a tool to assist recruiters in easily identifying applicants matching their criteria, for transition into the second stage of recruitment.

At the M2A, the application form has the following functions:

- To establish the applicant meets the funders eligibility criteria.
- To demonstrate your academic and professional suitability for undertaking the research project.

Shortlisting for projects consists of two phases

1. Sifting by the M2A team for eligibility and general suitability to the applied project field.
2. Final selection for interview by sponsoring company and academic supervisor.

Being able to construct a well-crafted application, is key to achieving selection for interview. Your aim here is to make it easy for the short-lister to say yes.

General Tips:

- Always spell and grammar check your application.
- Always proofread your text or ask a competent person to help.
- Always answer every part of the questions asked.

Specific Tips:

- Always read the instructions. The application form is structured to filter out irrelevant information.
- Speak to the academic supervisor to gain a greater understanding of the project.
- Research the company associated with the project and if possible, find out a little about the industry supervisor.
- Avoid abbreviations / jargon. Do not assume the short-listing panel will be familiar with either you specifically, or with your current course and performance.
- Tailor your responses towards the project for which you are applying.

The Personal Statement

The personal statement should respond to two questions, as indicated below. Taking each in order:

TIP: The personal statement will be shared with project supervisors and industry partners as part of the short-listing process. It is essential, applicants communicate and evidence their full skill set, aligning to the project.

Question 1 - Please provide evidenced examples demonstrating your interest, motivation for study and technical suitability for the project to which you have applied.

The first key point to note is the question has three parts.

- Interest
  - What has attracted you to apply for the specific project – a desire to undertake research and to collaborate with companies.

- Motivation
  - What is driving you to take on postgraduate study – We're looking for how this links in with your long-term plans, and evidence of your commitment to solving the research problem.

- Technical Suitability
  - We are not looking for a fully qualified individual as this is a training programme, but we need to see a level of competence coming from your education/career that can be applied to solving the research problem.

To fully address these questions, first consider what skills you have, and how each of these relate to the research project in question.

Try making a list of your skills. Consider which are "Key Skills" and which are "Transferable" Skills. Now, think about your experience(s), knowledge, and attributes. Consider how these align to Interest, Motivation and Technical Suitability. Use these lists to start building a structured response to each of the three points. Below is an example of how this might look.

Examples

Interest

Over the past three years I have studied for a BEng Materials Engineering at Swansea University. The course covers a range of materials including metals, ceramics, polymers, and electronic materials. Through all three years I have taken modules in which I have learned about the manufacturing, processing, microstructure, and mechanical properties of a range of steels. Through laboratory classes I have gained experience of metallography and tensile testing, both of which are pertinent to this position. The advertised project is of interest to me, as it builds on this foundation of

knowledge. I have read around the topic, particularly the recent paper by Warren and Wint et al Materials Science and Engineering 2019, 12, 23, which discusses current thinking in the field, and provides a starting point for this project.

Motivation

I am motivated to apply for this post for two specific reasons.

I have enjoyed my undergraduate studies and particularly the independent research project undertaken in my final year. My project has allowed me to both develop and demonstrate my skills as an independent researcher. Over the course of the project, I have encountered a variety of challenges, and through progression of the research I have learnt to work independently, to be self-starting and to manage my time such that commitments can be met. I have completed all my lab work and have submitted the first draft to my supervisor, within the timeline set down by the College.

I am keen to continue learning, through the taught modules and research project, and through the activities of the sponsoring company. I have much still to learn about the steel industry, and greatly value the opportunity to work and learn alongside a significant manufacturing organisation. I have been successful in applying for vacation work with Warren Industries UK and have spent the past two summers working at their Swansea Plant. On both occasions I have learned much from the placement i.e., people skills, technical writing, planning and organisational skills. I understand the importance of practising both sets of skills (academic and soft skills) to develop and prepare for a future career in Engineering.

Technical Suitability

Throughout my undergraduate studies I have taken a number of lab classes and have learnt the sample preparation techniques needed to be able to examine the microstructure of a material using optical, and electron microscopes. In addition, I have used a suite of tests to characterise the mechanical properties of materials, including those most relevant to project i.e., hardness, tensile, bend and impact testing. I have a good working knowledge of steel processing and how processing conditions change the resulting mechanical properties. I recently presented my final year steel research project to members of the local Materials Society. I prepared and presented a ten-minute PowerPoint presentation, after which I answered questions from the floor and panel members. Although some questions were very tough, I was able to think laterally and provide confident answers. The panel commended me on my response to questions, and I have been invited into an undergraduate lecture competition, on the strength of my performance (letter attached).

Question 2 - Other information in support of your application.

Please provide evidenced examples to support your statement. Please demonstrate via examples your research skills and any positions of esteem

In Question 1 we have covered technical suitability, motivation, and interest in the project. So, how can we answer question 2 without repeating ourselves?

First, consider what other information or skills might be useful in conducting a research project?

Have you undertaken a research project before? What stages might there be? Positions of esteem gives the opportunity to demonstrate translatable skills, of benefit to a research post.

What examples can you draw from work experience and personal life? e.g., overcoming problems.

Below is a list of skills, attributes and behaviours which might be appropriate. Take these suggestions as a starting point to consider what might be relevant to your research question and create an evidenced narrative to address the question.

Time Management *Self Starting* *Critical Analysis* *Planning* *Risk Assessments*

Literature Reviews and Abstracts *Technical Writing* *Research Methods* *Ethics*

Focus *Referencing* *Setting Objectives* *Office Skills* *Software Skills* *Bibliography*

Data Analysis *Presentation Skills* *Leadership* *Commitment* *Determination* *Resilience*

Feedback *Ability to work independently* *Ability to work as part of a team* *People Skills*

Library Skills *Communication skills* *Critical thinking*

Remember to be concise. When structuring your response, give context to your example, confirm actions, and detail the outcomes (do not forget outcomes can include skills developed and feedback).

Good Luck!