# Reflective Practice: I am an Engineer

This Personal Professional Development (PPD) Form has been designed to support your documentation of your personal and professional development reflections.

The form is a frameworks to assist you in your:

* PPD: Reflective Practice: I am an Engineer, use this form to reflect and provide any hard evidence examples that support your reflections, for example digital copies of your assessments and tutor feedback. Do you’re your Appendices in your personal reflections to provide supporting evidence in your reflections.
* Action Plan: To identify areas for personal development, strategy on how to address.

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| **I solve interesting problems** |
| How do you apply your critical analytical, experimental and computational methods to solve engineering problems?  How did you identify constraints and then develop them into solutions that meet those constraints?  Which physical principles and understanding have you drawn upon to solve the problems?  Which modules, which course works have enabled you to develop this skill and how?  Describe using situation, task, action and result (STAR). |
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| **I get my point across** |
| * How do you effectively communicate your point of view to an audience? * How have you selected data to be presented carefully? * Which methods have you used to correctly convey the way to present that data? * Which methods of communication have you developed; report writing, blogs, presentations, posters, etc.? * Which modules, which course works have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I contribute to a team** |
| * What role did you play in a team? * How did you contribute to the team? * How did you negotiate, lead, organise yourself and others in the team? * How did you work independently to deliver tasks for the team? * Which modules, which course works, which engineering extra curriculum activity, which union activity have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I work well with others** |
| * How have you been empathic to others (peers, managers, colleagues, friends, tam mates) ways of working? * How have accommodated others disabilities when working with them? * How willing are you to learn from others cultures and religions that influence the way they work? * How have you been inclusive in the way you work with others of different genders? * How have you been an ally to others at work from different minority communities (gender, LBQT+, ethnicity, religion, age) * Describe using situation, task, action and result (STAR) |
| <Your reflective answer> |

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| **I am professional** |
| * How do you apply a professional attitude to a task or in groupwork? * How have you managed your time, punctuality and attendance? * How have you managed and organised your workload and your time? * Have you joined a professional body? * Have you attend any professional body events? * Which modules, which course works have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR) |
| <Your reflective answer> |

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| **I can lead and manage a team** |
| * How have you lead a team to successful outcome? * How have you brought all the team members to a successful outcome? * Though leadership how have you demonstrated allyship leadership? * Through your leadership have you be equal, diverse and inclusive in your approach? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I evaluate outcomes** |
| * How do you apply your critical technical evaluate and sensitivity analysis your work? * How do you understand uncertainty? * Which modules, which course works have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I make decisions** |
| * How have you based your experimental conclusions based on scientific and engineering principles? * How did you critically evaluate your decisions/engineering solutions and others? * Which modules, which course works have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I use the right tools for the job** |
| * How have you selected the right tools, computational, experimental, in practice, workshop, e.g. finite analysis, Vicker's Hardness Test, CAD, drawing, Milling, literature resources. Etc? * How did you decide which tool to use? * How have you mastered the tools application? * Which modules, which course works have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I understand how the world works** |
| * How have you questioned the engineering solution, product or approach in respect to learning from other modules? * How have applied engineering concepts, knowledge and into your application of your engineering learning? * How have you designed, mathematically modelled, or tested engineering concepts? * How have you tested performance and limits of systems theoretical or in practice? * Which modules, which course works have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
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| **I work at the cutting edg**e |
| * How have you kept abreast of your engineering field? * What resources, activities, and events have you attended or been involved in outside the class room and engineering workshops to deepen and broaden your engineering knowledge? * Which modules, which course works, which engineering extra curriculum activity, professional bodies events have enabled you to develop this skill and how? * Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I am an ethical engineer** |
| In my Bill of Materials, I consider ethical issues with respect to the source, location or extraction method of the raw materials used to produce refined materials   * I implement a robust testing programme that conforms to good scientific methodology principles, industry standards, regulations and/or directives * How have you applied health and safe practices? * My engineering proposals instil the values of peace, social justice, and environmental protection. * I am honest, fair and open-minded and my projects take into account the protecting of the health, welfare and safety of the public |
| <Your reflective answer> |

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| **I use UNESCO Sustainability Development Goals in my projects** |
| I take a cross disciplinary and collaborative engineering approach which includes working with those experiencing the problem we are trying to solve  I conduct comprehensive life cycle assessment of my engineering solutions  Outline which of the 17 UNESCO Sustainability goals are embedded in your project  I am environmental and sustainable responsible  I have tried to go over and above legislations were possible and thereby challenge the status quo using latest scientific information  How have you considered the impact of your engineering solutions on others and on world resources?  Which modules, which course works have enabled you to develop the above skills and how?  Describe using situation, task, action and result (STAR). |
| <Your reflective answer> |

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| **I consider Risk** |
| My work takes into account Health and Safety issues as well as complies with legislations  I consider risk management and mitigation |
| <Your reflective answer> |

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| **I consider Security issue in my work** |
| I design out crime in my work  I apply principles of security engineering and audit the security of my engineering solutions to ensure they comply with safety standards; are tamper proof ; secure against terrorist attack or cyber attack |
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| **I consider Equity, Diversity and Inclusion in my work** |
| * I work on my authentic self being present in my work and in my interactions with colleagues * If you identify with any or several minority groups, have you considered how to use this as an advantage in your work? for eg a female engineer used her lived experiences and engineering knowledge to create a for women by women sports shoes after identifying there were no sports shoes researched and designed based on the female anatomy * I bring into the room authentic voice of others in person or research of the literature to make an epistemic difference * I have engaged in several extracurricular activities to develop my social capital which has in turn helped me forge links with my fellow engineering colleagues and expand my network * I try to interact with fellow students who look different from me or are from different background |
| <Your reflective answer> |