

For use by the Project lecturer	Approved	Revision required
Feedback		

Project number on list of Project concepts remains the project's identifier.

You will submit Rev 0 on the AMS (this may be your own iteration 10, but will still officially be your Rev 0 submission).

To be completed by the student				
PROJECT PROPOSAL 2023			Project no	Revision no
Title	Surname	Initials	Student no	Study leader (title, initials, surname)
Project title				

Language editor name	Language editor signature
<u>Student declaration</u> I understand what plagiarism is and that I have to complete my project on my own.	<u>Study leader declaration</u> This is a clear and unambiguous description of what is required in this project
Student signature	Study leader signature and date

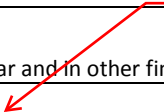
1. Project description

What is your project about? What does your system have to do? What is the problem to be solved?

2. Technical challenges in this project

Describe the technical challenges that are *beyond* those encountered up to the end of third year and in other final year modules.

note the use of full sentences



2.1 Primary *design* challenges


2.2 Primary *implementation* challenges

3. Functional analysis

3.1 Functional description

Describe the design in terms of system functions as shown on the functional block diagram in section 3.2. This description should be in narrative format.

Note that functional units are specifically mentioned.
This is a requirement.



This functional block diagram is the right idea (contains function in each block and captures signal flow and processing in the system), but should not contain descriptions in each block. The block should simply name the function. Section 3.1 contains the description.

3.2 Functional block diagram

The first three requirements are similar to those in the class example. See class notes for more detail on how these were obtained.

4. System requirements and specifications

These are the core requirements of the system or product (the mission-critical requirements) in table format IN ORDER OF IMPORTANCE. Requirement 1 is the most fundamental requirement.

	Requirement 1: the fundamental functional and performance requirement	Requirement 2	Requirement 3
1. Core mission requirements of the system or product. Focus on requirements that are core to solving the engineering problem. These will reflect the solution to the problem.			
2. What is the target specification (in <i>measurable</i> terms) to be met in order to achieve this requirement?		Note that the selected values in row 2 are MOTIVATED in TECHNICAL TERMS here.	
3. Motivation: <i>how or why</i> will meeting the specification given in point 2 above <i>solve the problem</i> ? (Motivate the <i>specific</i> target specification selected)			
4. How will you demonstrate at the examination that this requirement (point 1 above) and specification (point 2 above) has been met?			Always specify the platform for software. A PC platform is almost never allowed in Project.
5. Your own design contribution: what are the aspects that <i>you will design and implement yourself</i> to meet the requirement in point 2? If none, <i>remove this requirement</i> .			
6. What are the aspects to be taken off the shelf to meet this requirement? If none, indicate "none"			Note again that library functions are ONLY allowed for low level hardware interfacing

Comment
Note that this always explains how you arrived at the numerical value of the target specification

Comment
Without any other guidance on how to select the size of an allowed error, you may use this rule of thumb in Project: "Small error" is 10%. "Very small error" may be taken as 1%.

System requirements and specifications page 2

	Requirement 4	Requirement 5	Requirement 6
1. Core mission requirements of the system or product. Focus on requirements that are core to solving the engineering problem. These will reflect the solution to the problem.			
2. What is the target specification (in <i>measurable</i> terms) to be met in order to achieve this requirement?			
3. Motivation: <i>how or why</i> will meeting the specification given in point 2 above <i>solve the problem</i> ? (Motivate the <i>specific</i> target specification selected)			
4. How will you demonstrate at the examination that this requirement (point 1 above) and specification (point 2 above) has been met?			
5. Your own design contribution: what are the aspects that <i>you will design and implement yourself</i> to meet the requirement in point 2? If none, <i>remove this requirement</i> .			
6. What are the aspects to be taken off the shelf to meet this requirement? If none, indicate "none"			

This must be indicated explicitly

This should simply clearly define the contribution of the student.

You don't need to complete all 12 requirements fields

System requirements and specifications page 3

	Requirement 7	Requirement 8	Requirement 9
1. Core mission requirements of the system or product. Focus on requirements that are core to solving the engineering problem. These will reflect the solution to the problem.			
2. What is the target specification (in <i>measurable</i> terms) to be met in order to achieve this requirement?			
3. Motivation: <i>how or why</i> will meeting the specification given in point 2 above <i>solve the problem</i> ? (Motivate the <i>specific</i> target specification selected)			
4. How will you demonstrate at the examination that this requirement (point 1 above) and specification (point 2 above) has been met?			
5. Your own design contribution: what are the aspects that <i>you will design and implement yourself</i> to meet the requirement in point 2? If none, <i>remove this requirement</i> .			
6. What are the aspects to be taken off the shelf to meet this requirement? If none, indicate "none"			

System requirements and specifications page 4

	Requirement 10	Requirement 11	Requirement 12
1. Core mission requirements of the system or product. Focus on requirements that are core to solving the engineering problem. These will reflect the solution to the problem.			
2. What is the target specification (in <i>measurable</i> terms) to be met in order to achieve this requirement?			
3. Motivation: <i>how or why</i> will meeting the specification given in point 2 above <i>solve the problem</i> ? (Motivate the <i>specific</i> target specification selected)			
4. How will you demonstrate at the examination that this requirement (point 1 above) and specification (point 2 above) has been met?			
5. Your own design contribution: what are the aspects that <i>you will design and implement yourself</i> to meet the requirement in point 2? If none, <i>remove this requirement</i> .			
6. What are the aspects to be taken off the shelf to meet this requirement? If none, indicate "none"			

This is from the class example

5. Field conditions

These are the REAL WORLD CONDITIONS under which your project has to work and has to be demonstrated.

	Field condition 1	Field condition 2	Field condition 3
Field condition requirement. In which field conditions does the system have to operate? Indicate the one, two or three most important field conditions.			
Field condition specification. What is the specification (in measurable terms) for this field condition?			

All of this copied from the class example

6. Student tasks

6.1 Design and implementation tasks

List your primary design and implementation tasks in bullet list format (5-10 bullets). These are *not* product requirements, but *your* tasks.

6.2 New knowledge to be acquired

Describe what the theoretical foundation to the project is, and which new knowledge you will acquire (beyond that covered in any other undergraduate modules).

Note that FULL SENTENCES are used throughout. This is a requirement.