

# ENGI 3051

## Template for Software Design Document

### “Suggested” (but not limited to) Items

1. Cover page
2. Revisions page
3. Table of content
4. Introduction
  - a. Design overview
  - b. Changes to the specifications document, if applicable
5. Complete the system architecture design
  - a. System architecture (extraction of classes and their interconnection)
  - b. Complete/correct version of class diagrams
  - c. System interface description (GUI)
6. Draw the sequence diagram of the realization of the “normal” scenario of some important use cases of the system (if this is not done already in your spec. document).
7. Object Oriented Design
  - Step 1. Complete the class diagram
    - ▶ Determine the formats of the attributes of each class
    - ▶ Determine the operations (methods) of each class, with their complete signature
    - ▶ Introduce algorithms used to implement methods and analyse the complexity of these algorithms in terms of time and storage.
  - Step 2. Perform the detailed design of each class
    - ▶ Use pseudocode format with the Java programming language selected to represent the detailed design. Provide the pseudocode for some (but not all) of the important operations of the client and server systems.
8. Updates version of database diagrams (if applicable)
9. Updates version of GUI (if applicable)
10. Design Impacts
  - Final analysis of privacy, security and/or safety issues in the design of the software system
  - Final analysis of the societal and economic impacts of the software system.
  - Updated project costs including marketing cost and revenue generation and profitability analysis.
11. Technical documentation related to the design and references.
12. Document structure, style, readability, and the use of high quality drawings, graphs, and other figures.

**ENGI 3051**  
**Assessment of Design Document**  
**(Group Mark)**

Student Name:

Student Name:

Student Name:

<b>Aspect</b>	<b>GAI Assessed</b>	<b>Level (1 to 5)</b>	<b>Mark (%)</b>	<b>Contribution to overall report mark (%)</b>
<b>Design of large scale software systems</b>	<b>SEGAI 2.1</b>			<b>50</b>
<b>Discussion of algorithms and their complexity analysis</b>	<b>SEGAI 2.2</b>			<b>10</b>
<b>Analysis of privacy, security and safety risks</b>	<b>SEGAI 4.6</b>			<b>5</b>
<b>Societal and economic impacts</b>	<b>SEGAI 4.7</b>			<b>5</b>
Presentation of idea and organization of document	SEGAI 7.1			10
Formatting and Style	SEGAI 7.1			10
<b>Assessment of Written Communication skills</b>	<b>SEGAI 7.1</b>			<b>20</b>
<b>Format, clarity and accuracy of design graphics and other figures.</b>	<b>SEGAI 7.2</b>			<b>10</b>
<b>Total Report Mark</b>				<b>100</b>