

*Polytechnic
University*

**Computer and Information
Sciences**

Software Engineering Standards

Requirements/Analysis Specification

Version 1.0

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Team Members (Name and email)

REVIEW AND APPROVALS

Printed Name and Title	Function (Author, Reviewer, Approval)	Date	Signature
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1. INTRODUCTION

1.1 Purpose

Purpose of this document. Describe what it contains.

2. SCOPE

2.1 Identification

Identification of this document (name, number, revision)

2.2 Bounds

System boundaries – clearly describes the boundaries of the system. I describes what is included and what excluded in the system.

2.3 Objectives

Including project priority, type of delivery: Life cycle (single deliverable, incremental, or evolutionary) and initial deliverable (milestone) dates.

2.4 System Overview

Brief description of the system

2.5 Document Overview

Overview of the contents of this document

A one line description of the contents of each section

3. REFERENCE DOCUMENTS

Include a reference to the project proposal

All reference must contain the document name, author, team, version, and date

4. BUSINESS REQUIREMENTS

4.1 Technology

Business technology drivers for this system, if any

4.2 Economics

Business economic drivers for this system, if any

4.3 Regulatory and Legal

Not required

4.4 Market Considerations

Business market drivers for this system, if any

4.5 Risks and Alternatives

Identify system risks and alternative solutions for each risk

4.6 Human Resources and Training

Business (project) resources and training required

5. DESCRIPTIVE FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS

5.1 System's Purpose

Describes the purpose of this system

5.2 Functional Descriptive Detailed Requirements

For each functional requirement:

Functional requirements definition

Functional requirements specification for each definition

5.3 Non-Functional Descriptive Detailed Requirements

For each non-functional requirement:

Non-Functional requirements definition

Non-Functional requirements specification for each definition

5.4 Context Diagram

High level (level – 0) diagram identifying system boundaries

6. FUNCTIONAL REQUIREMENTS ANALYSIS SPECIFICATION

Object -Oriented or Structured Systems methodology.

Only the Object-Oriented paradigm is described below

6.1 System Capability Requirements

6.1.1 Capabilities

Use Case diagrams

Use Case interaction diagrams

6.2 User Interface Requirements

Details required if a prototyping life cycle model is used

Otherwise (for this project) give a brief technology description (UNIX - X.11 or Motif; PC windows with browser HTML or XML)

6.3 Component Architecture

6.3.1 Component Descriptions

6.3.2 Component Architecture Diagram

6.4 Class Diagrams

6.5 Class Relationship/Interaction Diagrams

6.6 Event Section

Events to which the system responds

6.6.1 Event Dictionary

Motives (USE Case) - > Event (type) -> Activity (Scenario)

6.6.2 Event Diagrams

6.7 Activity/State (Scenario) Section (To be completed in design)

A scenario (work flow) diagram will be provided for each scenario

6.7.1 Activity (Scenario) Diagrams

Describes components/tasks and their relationships

6.7.2 Activity (Scenario) Specification

Formal (pseudo language) specification describing the process (tasks) for each activity (scenario) including the following constraint requirements:

6.8 Sequence Diagrams

6.9 Collaboration Diagrams

6.10 Dictionaries

Classes, methods, attributes, events, class relationships, messages, etc
Identified here and documented in the appendix

7. NON-FUNCTIONAL/OPERATIONAL REQUIREMENTS

7.1 System External Interface Requirements

7.2 Safety Requirements

7.3 Security and Privacy Requirements

7.4 System Environment Requirements

7.5 Computer Resource Requirements

7.5.1 Computer Hardware Requirements

7.5.2 Computer Hardware Resource Requirements

7.5.3 Computer Software Requirements

7.5.4 Computer Communications Requirements

7.6 System Quality Factors

7.7 Design and Construction Constraints

7.8 Personnel-Related Requirements

7.9 Training-Related Requirements

7.10 Logistics-Related Requirements

7.11 Packaging Requirements

7.12 Precedence and Criticality Requirements

7.13 Other Requirements

8. SYSTEM TEST PLAN REQUIREMENTS

Test plans with scenario testing and required simulators

9. QUALIFICATION PROVISIONS

Verification and validation

10. REQUIREMENTS TRACEABILITY

11. RATIONALE

12. NOTES

13. APPENDICES

13.1 Dictionaries

13.2 UML diagrams, if not included in the body of the document

Identified in body of document

13.3 Schedule Tracking

Time (hours)

Artifact or Deliverable	Who (individual and team)	Estimated	Actual	Difference
RAS	Individual members			
	Team summary			

Cumulative

Who (individual and Team)	Estimated	Actual	Difference
Each Individual			
Team summary			

13.4 Defect Tracking

Counts

Artifact or Deliverable	Who (individual and team)	Estimated	Actual	Difference
RAS	Individual members			
	Team summary			

Cumulative

Who (individual and team)	Estimated	Actual	Difference
Individual members			
Team summary			

- Gantt or Microsoft Project Schedule