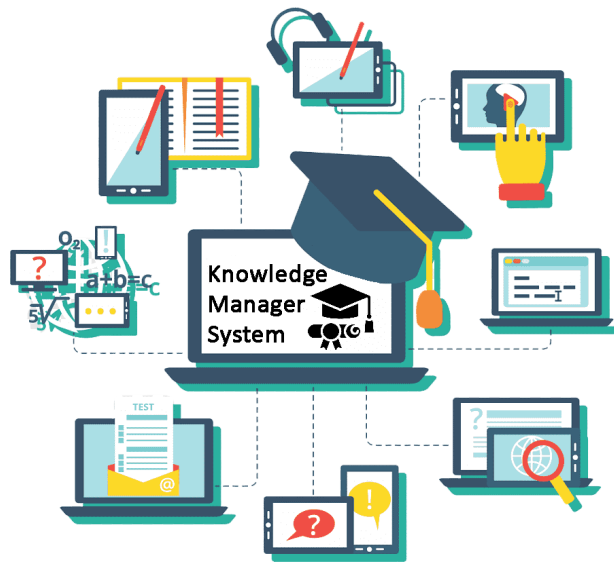# SOFTWARE REQUIREMENTS SPECIFICATION

DreamCourses

Revision: 1.1
SYSTEMS AND COMPUTER DEPARTMENT

May 12, 2021

Contents

Document file

Date	Review	Description	Author
12-05-2021	1	Initial project documentation	Chavez Eduardo

Document validated by the parties on date: (12/05/2021)

Customer	Supplier
Jaime Leonardo Enriquez Alvarez	*Helltakers*

	Requirements engineering document

1. Introduction

This document will detail both the general and specific concepts on the content of the project, ranging from the proposal to the requirements necessary to make the application work effectively, covering its characteristics in the same way.

1.1 Purpose

Our purpose is to detail the key ideas of the project and make our client also understand the path that will be taken to realize their vision within the program; that this document fully expresses the full context that the customer needs.

1.2 Scope

- *The system is called: DreamCourses*

- *The system will be able to host online courses where people can buy courses and learn from their content, users will have an account and there will be 4 different types of users (Normal User, Teacher, Supervisor, Administrator); There will be an option to recover password and the payments to the courses will be under different payment methods; In addition to this, the courses will have a deadline and their certification, in the same way, the courses will restart after one year, so the user must be aware of their deadline at all times; The courses will also have a calendar of activities and must meet certain requirements to be accepted on the platform.*

- *We have contemplated that the system will be available to all audiences and that any teacher who is interested in working on the platform has the facility to create courses with the tools provided in the system, as well as later to be able to host courses in different languages and be able to have more various payment methods.*

- *Based on the ERS IEEE 830 standard.*

1.3 Personnel involved

Name	*Chavez Lopez Eduardo Guillermo*
Role	*Project leader*
Professional category	*Informatic engineer*
Responsibilities	*Manage and guide the project*

Name	Dominguez Cervantez Daniel Ivan
Role	*Lead Programmer*
Professional category	*Informatic engineer*
Responsibilities	*Lead the main programming*

Name	Flores Aguila David Antonio
Role	*Environment designer*
Professional category	*Informatic engineer*
Responsibilities	*Control the design of the system and its interface*

Name	Valadez Camacho Gustavo
Role	*Support programmer*
Professional category	*Informatic engineer*
Responsibilities	*Help with extra programming*

Name	Vazquez Osuna Laura Michelle
Role	*Environment programmer*
Professional category	*Informatic engineer*
Responsibilities	*Program environment and help with similar tasks*

1.4 Definitions, acronyms and abbreviations

Definition
● *User: Person who will use the program.*   ● *Common customer or client: User who will take and buy courses on the platform*   ● *Teacher: Teacher who creates the courses.*   ● *Supervisor: Area supervisor who evaluates courses and accepts them or not.*   ● *Administrator: Person in charge of controlling the correct functioning of the platform.*

1.5 References

Reference	Title
IEEE	*Standar IEEE 830-1998*

1.6 Document overview

The document consists of 5 sections for the explanation and understanding of the project.

First we have the introduction; where the content and presentation of the document are detailed.

Second we have the general description; that will give the central idea of the project.

Third we have the specific requirements; that will show the specific requirements necessary to make the platform work.

Fourth we have the external interface requirements; that provides special details about the use of the interface.

Lastly, we have the system requirements; that will detail exactly what the system needs to meet the needs that are requested.

2. General description

2.1 Product perspective

The system will be developed to work in web environments, which will allow the system to be fast and flexible in addition to being a universal environment; The system will be done independently from other apps, so it will work in a similar way to a course application such as Udemy or Platzi.

2.2 Product functions

The functions that the platform will perform will be the following, depending on the user type:

*Client user: Create an account, enter the system and see the available courses, buy the courses, take classes from the purchased courses, see course progress, take an exam and obtain a certificate. *

Teacher: Create courses, implement tools in courses, scheduled courses, set activities, send courses for review for future evaluation and acceptance.

Supervisor: Supervise the area in charge, evaluate and accept / deny courses, suggest changes to denied courses.

Administrator: Create new users and also accept / deny courses and do practically everything within the platform.

2.3 User Features

User type	*Client User*
Training	*Any*
Activities	*Interact with the platform*

User type	*Teacher*
Training	*Professional*
Activities	*Create courses*

User type	*Supervisor*
Training	*Professional*
Activities	*Accept or deny courses*

User type	*Administrator*
Training	*Professional*
Activities	*Manage the platform*

2.4 Restrictions

- *The system always has to be used with the internet.*
- *The system will use the Client / Server model.*
- *Use of both web (HTML) and c # languages*
- *Using database as SQL Server*
- *Ease to support concurrency of users.*
- *Use of web domain*

2.5 Assumptions and dependencies

- *The requirements set forth here are assumed to be constant and never changing.*
- *The computers where the platform will be running meet the basic execution requirements.*
- *Users have constant access to the internet.*
- *All users have basic knowledge of using the computer.*

3. Specific Requirements

Specific requirements that describe in detail the most outstanding concepts of each of the aspects of the project and the interaction with users.

3.1 List of user requirements

Number	**RU-001**
Name	Login
Description	Each kind of user will have their own account to enter the platform with a password.

Number	**RU-002**
Name	Recover password
Description	The user will have the option of recovering their password by email.

Number	**RU-003**
Name	Design
Description	The design of the platform has to be minimalist so that the user does not have any complications navigating it.

Number	**RU-004**
Name	Courses
Description	The courses that will be implemented within the platform will be of the basic, technical, operational and practical kind.

Number	**RU-005**
Name	Expiration
Description	Each course will have a one-year expiration, and in case of losing it, it must be retaken from the beginning.

Number	**RU-006**
Name	Catalog
Description	The course catalog may be divided according to the category of each role or user profile, adapting to their position.

Number	**RU-007**
Name	Payment method
Description	The payment method will be through debit / credit card, and paypal as an optional method.

Number	**RU-008**
Name	Study material
Description	Videos and PowerPoint presentations can be uploaded to the platform.

Number	**RU-009**
Name	Course progress
Description	The user will be able to see the percentage of each course they are taking.

Number	**RU-010**
Name	Failing a course
Description	In case of failing a course, you must restart it in order to pass it.

Number	**RU-011**
Name	Course activities
Description	The activities of each course will be scheduled.

Number	**RU**-012
Name	Add course
Description	Each course will need to be reviewed by an area supervisor before adding it.

Number	**RU**-013
Name	Certification
Description	With the approval of any course a document will be generated which can be printed as proof.

Number	**RU**-014
Name	Information
Description	The institution may receive information on the most requested courses, obsolete courses, and which users will have the course expired.

Number	**RU**-015
Name	Course expiration
Description	In the event that any course is about to expire, the user will be notified within a period of 15 days to be able to communicate with the coordinator of the course.

4. Requirements for external interfaces

4.1 User interfaces

The user interface will consist of a set of windows that will be navigable through a header, and will also contain buttons according to the user's required actions and text fields.
This interface will be built specifically for the proposed system, and can be viewed and visited from a web browser.

4.2 Hardware interfaces

It will be necessary to have computer equipment in perfect condition with the following characteristics to access the platform:

- *Network adapters.*
- *1.66GHz processor or higher.*
- *Minimum memory of 256Mb.*
- *Mouse.*
- *Keyboard.*

4.3 Software interfaces

- *Operating System: Windows 7 or higher.*
- *Explorer: Mozilla, Explorer, Opera or Chrome*

4.4 Communication interfaces

Communication between servers, applications and clients will be carried out using standard internet protocols, whenever possible. For the transfer of multimedia content, existing protocols such as FTP should be used.

5. System requirements

This subsection must specify all those actions or functions that the software must carry out, usually those actions expressed as "the system must ...". If necessary, you can use graphical notations and tables, but in natural language.

5.1 Functional requirements

Number	RF-001		
Name	Login		
Description	The system must allow employees to enter the platform with a registered username and password.		
Preconditions	The user must be registered in the system with a username and password.		
Normal Sequence	Step	Action	
	1	The user must enter the Login section on the main screen of the platform.	
	2	The user must enter their username and password.	
	3	El usuario habrá iniciado sesión con su cuenta.	
Postcondition		The system will show the user the main screen and the options available.	
Exceptions	Step	Action	
	1	The user is not registered in the system.	
	2	The system should display the message "Enter a registered username and password".	
Priority	■ High / Essential	☐ Media / Desired	☐ Low / Optional

Number	RF-002	
Name	Password recovery	
Description	The system must allow the user to retrieve their password by email, in case of forgetting it.	
Preconditions	There must be a record of said account.	
Normal Sequence	Step	Action
	1	The user must enter the Password Recovery section.
	2	The user must enter the email to which they want their password to be sent .

	3	The system will send an email with the password for that account.
Postcondition		The system will display the message "Password sent to your email", and will give the option to return to the Login section.
Exceptions	Step	Action
	1	The email account is not registered in the system.
	2	The system should display the message "The email account is not registered in the system".

Priority	■ High / Essential	□ Medium / Desired	□ Low / Optional

Number	RF-003
Name	Roles
Description	The system must allow users to be assigned a role corresponding to their activities in the company.
Preconditions	Functional requirement RF-01 must be met.

Normal Sequence	Step	Action
	1	The user must enter the Login section on the main screen of the platform.
	2	The user must enter their username and password.
	3	The user will have logged in with their account and will be redirected to the Home screen according to their role.
Postcondition		The user will be redirected to the Home screen according to their role.
Exceptions	Step	Action
	1	The user is not registered in the system.
	2	The system should display the message "Enter a registered username and password".

Priority	■ High / Essential	□ Medium / Desired	□ Low / Optional

Number	RF-004		
Name	Categories		
Description	The Supervisor will be able to classify the available courses to choose in 4 categories: Basic, Technical, Operational and Practical.		
Preconditions	Functional requirements RF-01, RF-03 must be met, and the system must have a list of courses.		
Normal Sequence	Step	Action	
	1	The courses that wish to be offered must be created.	
	2	These courses must be classified into one of the 4 possible categories: Basic, Technical, Operational and Practical.	
	3	The course will appear classified in the chosen category.	
Postcondition		The system will show the courses classified in the 4 categories.	
Exceptions	Step	Action	
	1	The course is already in that category.	
	2	The system should display the message "The course is already in this category."	
Priority	■ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-005	
Name	Courses	
Description	The system must show the courses available to choose from depending on the role of the user.	
Preconditions	Functional requirement RF-01 and RF-03 must be met.	
Normal Sequence	Step	Action
	1	The user must enter the Login section on the main screen of the platform.

	2	The user must enter their username and password.
	3	The user will have logged in with their account and will be redirected to the Home screen according to their role.
	4	The system will show the courses available to choose from depending on their role.
Postcondition		The system will show the different courses available to choose from.
Exceptions	Step	Action
	1	The user is not registered in the system.
	2	The system should display the message "Enter a registered username and password".
Priority	■ High / Essential	☐ Medium / Desired ☐ Low / Optional

Number	RF-006
Name	Advance of the course
Description	The system must be able to show a percentage related to the total of the advanced course.
Preconditions	The functional requirements RF-01, RF-03 must be met, and the user must have started a course.
Normal Sequence	Step	Action
	1	The user must log in with their registered account.
	2	The user must enroll in a course.
	3	The user must complete activities available in the course.
	4	The system will display the advanced percentage of the course.
Postcondition		The system will display the advanced percentage of the course, and will allow to continue with the available activities or return to the Home screen.
Exceptions	Step	Action
	1	The activity did not complete successfully.

	2	The system will not show an advance in the percentage of the course.
Priority	☐ High / Essential	■ Media / Desired	☐ Low / Optional

Number	RF-007		
Name	Course approval		
Description	The system will allow the implementation of an evaluation to be able to pass the course, if it is not approved, it must be repeated.		
Preconditions	The functional requirements RF-01, RF-03 must be met, there must be a course started, and all available activities of the course must have been completed.		
Normal Sequence	Step	Action	
	1	The user must select a course.	
	2	The user must complete the course activities.	
	3	The user must do the evaluation of the course.	
	4	The user will obtain the result of the course evaluation.	
Postcondition		The system will show the result of the course evaluation and will give the user the option to generate a certificate.	
Exceptions	Step	Action	
	1	The user does not get a successful evaluation of the course.	
	2	The system should display the message "Evaluation failed, please retake the course".	
Priority	■ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-008
Name	New courses or updates
Description	The system will allow the Area Supervisor to review and approve proposals for new courses or updates, before adding it to the catalog.
Preconditions	Functional requirements RF-01, RF-03 must be met, and there must be course proposals or updates from the teachers.

Normal Sequence	Step	Action
	1	The Supervisor will review the available course proposals.
	2	The Supervisor will choose the proposals that are ready to implement.
	3	The Supervisor will add the new courses to their corresponding category.
Postcondition		The system will display the list of courses available in their corresponding category.
Exceptions	Step	Action
	1	The course proposals do not meet the requirements to be implemented.
	2	The Supervisor will add a note to the proposal with the instructions to be followed by the Teacher to improve that proposal.
Priority	■ High / Essential	☐ Medium / Desired　　☐ Low / Optional

Number	RF-009
Name	Certification
Description	The system will allow that when passing any course a document is generated, which they can print as proof of certification.
Preconditions	The functional requirements RF-01, RF-03, RF-05, and RF-07 must be met.

Normal Sequence	Step	Action
	1	The user must select a course.
	2	The user must complete the course activities.
	3	The user must do the evaluation of the course.
	4	The user will obtain the result of the course evaluation.

	5	The system will give the option of generating a document proving the certification of the course.
Postcondition		The system will generate the certificate with the user and course data.
Exceptions	Step	Action
	1	The user does not get a successful evaluation of the course.
	2	The system should display the message "Evaluation failed, please retake the course".
Priority	■ High / Essential	☐ Medium / Desired ☐ Low / Optional

Number	RF-010		
Name	Notification to the employee.		
Description	The system, in case a course is about to expire, must be able to notify the users within a period of 15 days so that they can communicate with the coordinator of the course.		
Preconditions	Functional requirements RF-01, RF-03 must be met, and they must have started a course.		
Normal Sequence	Step	Action	
	1	The user must log in with their registered account.	
	2	The user must enroll in a course.	
	3	The system will check if the course is about to expire in the next 15 days.	
	4	The system will display a message advising the user in case the course will expire in 15 days.	
Postcondition		The system will display a message to the user indicating the information of the coordinator of the course so the users can contact him.	
Exceptions	Step	Action	

	1	The course does not expire in the next 15 days.
	2	El sistema seguirá revisando si el curso está por expirar cada vez que se ingrese al mismo.
Priority	☐ High / Essential	■ Medium / Desired	☐ Low / Optional

5.2 Non-Functional Requirements

5.2.1 Performance

The requirements related to the load that the system is expected to support will be detailed.

Number	**RNF**-01
Name	Availability
Description	Users can access the platform to progress in their courses or in another activity whenever they want

Number	**RNF**-02
Name	Support
Description	The approximate number of users connected simultaneously is expected to be at least 50 users

5.2.2 Design restrictions

Anything that restricts decisions regarding the design of the application

Number	**RNF**-03
Name	Efficiency
Description	All system functionality and business transaction must respond to the user in less than 15 seconds.

Number	**RNF**-04
Name	Reliability
Description	In case of not finishing any form, delete it for security

5.2.3 System attributes

Here the attributes of the system and their definitions are explained in detail for a better understanding.

Number	**RNF**-05
Name	Security
Description	Only those customers who have a registered username and password will be able to access the platform, with recovery by alternate mail in case of forgetting.

Number	**RNF**-06
Name	Backup
Description	All systems must be backed up every 24 hours. Must be stored in a secure location located in a building other than the that the system resides and in a cloud

5.2.4 Other requirements

Any other requirement that does not fit in another section.

Number	**RNF**-07
Name	Usability
Description	Its design must be minimalist, simple and intuitive.

5.3 Appendices

The document is completely independently elaborated and only uses the ERS IEEE 830 template and format for its elaboration, all the content of the document is the property of the team in charge and its manipulation is done entirely by the development team.