# GINA CODY School of Engineering and Computer Science Department of Computer Science and Software Engineering Concordia University SOEN 342 Phase 1

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#### **Abstract**

This document is a proposal for an e-learning platform targeted to university students to get them help with their courses by pairing them with professional tutors. The first part of the document is the market analysis. In other words, a comparative study of the existing systems and a questionnaire targeted to university students were elicitation techniques used in order to get an idea of the features and characteristics of the system to be. The second part was the presentation of the system developed. The general features of the application were listed followed by a list of functionalities of each type of user. Finally, the project value is explained in which we argue how the system developed will be better than its existing systems.

Part I: Market analysis

#### Comparative study

Q&As	AlloProf	Udemy	Liberty Tutoring	Super Prof
Offered Services?	Games to practice subjects (Math, French, Chemistry, Physics,)  Practice exercises/exams  Cheat-Sheet  Videos for revision  No tutoring  Q&A section	Self-learning classes (exercises, learning modules, practice exams, certifications, )	Free first consultation Tutoring	Tutoring  Request Management: create/edit/ca ncel  Lesson (in person/remot e) management: create/edit/ca ncel
Requires an account to	Only required for HelpZone	Yes	Required for first	Yes

access the services?	(to ask questions)		consultation	
Search Queries?	Subject, Course, Education Level	Subject, Category	Education level	Subject, Tutor
Education Level?	Elementary to High School	University, Non Academic	Elementary to University	Elementary to University
Type of Users?	Teachers, Parents, Students	Teacher, Student	Students	Students
Subscription Type	Free	Free subscription for most University students	Hourly, Packages, One-time.	NA
		Price range depends on the course		

**Table 1**: Comparison of the services offered for AlloProf, Udemy, Liberty Tutoring and Super Prof [1] [2] [3] [4]

# **Existing Products and features**

# 1. Alloprof

Pros	Cons
<ul> <li>Filtering by class (chemistry, math, physics)</li> <li>Free question samples accessible without an account</li> <li>Staff, teachers and experienced students available to answer forum questions most hours of the day</li> <li>Website features free exercises, notes and video lectures for specific subjects</li> <li>Search bar available</li> <li>Filtered Q&amp;A section where user can ask questions if logged in</li> <li>Website has specific pages dedicated to teachers and tutors with articles to help them teach for different education levels</li> </ul>	specific tutors or arrange meetings  Targeted towards general education (no specific class)

Table 2 : Pros and cons of Alloprof [1]

## 2. Udemy

Pros	Cons
<ul> <li>Filtering by categories (Development, business, IT and software)</li> <li>Website features assignment, notes and video lectures for specific subjects</li> <li>Search bar available</li> <li>Filtered Q&amp;A section where user can ask questions if enrolled in a specific course</li> <li>User can see course description/curriculum/instructor/review without needing an account</li> </ul>	<ul> <li>Targeted towards specific lessons, but there are no specific class coverage</li> <li>Lot of self-learning involved: no one-on-one tutoring</li> <li>Enrollment is needed to ask questions on a specific course, but there is no answer guaranteed.</li> <li>No forum available to ask general questions</li> <li>Not all of the revenue goes to the tutors</li> <li>No free sample exercices available for practice</li> </ul>

Table 3 : Pros and cons of Udemy [2]

# 3. Liberty tutoring

Pros	Cons
<ul> <li>Packages offered for tutoring services</li> <li>Offers tutoring for specific courses</li> </ul>	<ul> <li>Doesn't offer a description/curriculum/activities of the tutoring session itself (has to do an one-on-one consultation)</li> <li>No forum to ask questions</li> <li>No filtering available for courses</li> <li>Expensive</li> <li>No free sample exercices available for practice</li> </ul>

Table 4: Pros and cons of Liberty tutoring [3]

## 4. Super prof

Pros	Cons
<ul> <li>Search bar to filter for specific classes, subjects and tutors</li> <li>Filtering for rate, response time, level and subject available</li> <li>Available for all levels of education</li> <li>Rating system that ensures reliability of tutors</li> <li>Easy to apply system for tutors</li> <li>Offers online and in person tutors</li> <li>Connects students and tutors directly</li> <li>Very simple UI making it easy to navigate</li> </ul>	<ul> <li>No forums available</li> <li>No free classes, notes or exercises available</li> <li>Creation off an account is mandatory even to ask questions</li> </ul>

Table 5 : Pros and cons of Super prof [4]

#### Survey

After performing the comparative study, we decided to launch a survey targeting university students in order to collect as much information on their preferences, needs and complaints about the currently existing tutoring companies on the market. This allowed us to better understand the clients' needs which we later translated into features and functionalities into the platform in order to offer a better service and surpass the competitors.

In the survey, we collected information on the three following platforms: Udemy, Alloprof and Liberty Tutoring. Out of the three platforms, Udemy was the one used the most followed by AlloProf and Liberty Tutoring. Given the low number of votes received on Liberty Tutoring, it was excluded from the dataset.

According to the results displayed below (see figures 1 & 2), User Interface & the resources availability were the two most appreciated features by the platform's users. Therefore, during the software development phase, more emphasis needs to be put on the platform's interface since it appears to please the users the most, it will be considered a high priority requirement. The user interface will also be added to the list of project's values to highlight its importance.

Full results of the survey can be found here: 

Online tutoring questionnaire .xlsx

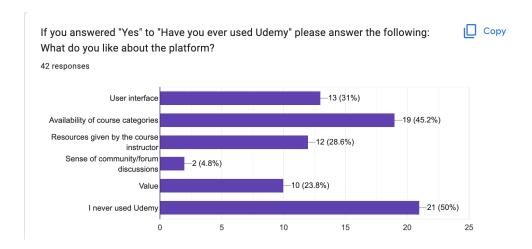


Figure 1: Survey results showing the top voted features of Udemy

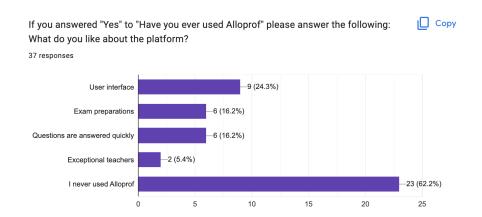


Figure 2: Survey results showing the top voted features of AlloProf

### Part II: E-Academy presentation

#### **Users**:

For the system to be developed, four types of users in the website will be considered. Students, Guests, Tutors and Administrators.

#### Proposed features

#### Features of the system

- Login and register into the system. 4 types of users and each user has different roles and different privileges
- A user Cart that will allow users to register in multiple courses and have the total amount calculated for them to pay.
- Meetings can be scheduled with the tutors through zoom or in person, 1 on 1 or group meetings with other students.
- Class forum for users to ask questions and connect with peers.
- Search for specific classes/tutors by filtering them and or writing keywords.
- Calendar system for both users with all important dates of meetings.
- Students will have access to all notes at all times once they make their full payment of the course enrolled.
- Request management system to manage requests of users.

**Table 6**: General Core features of the system to be

#### Student features

- Enrol/un-enroll to classes/lessons
- Access to a list of tutors for the class/lesson enrolled and can choose the tutor.
- Choose 2 types of meetings to meet the tutor: 1 on 1 meeting with the tutor or a group meeting with other students where tutors teach the subject.
- Access to a calendar with all scheduled meetings dates.
- Make payments for the courses enrolled through the Student Cart
- Post questions in a class forum of the courses enrolled and connect with other students
- Post reviews of tutors and classes
- Edit profile (credentials, payments)
- Request for a specific class

**Table 7**: Proposed features for Students

#### Guest features

- View classes and their descriptions
- View tutors and their bio
- Access all general sections of website (Homepage, course list etc)
- Request to be a tutor and provide necessary documentation.

Table 8: Proposed features for Guests

#### **Tutors features**

- Access to the list of classes that they will teach and can edit the course(s)/lesson(s) (description,price etc.)
- Access to a calendar with all of scheduled meetings with their students
- Schedule 2 types of meetings: in person or remote, 1 on 1 or group meetings
- Add time slots for their classes/lessons for students to request meetings
- Request to add/remove a class/lesson
- Answer questions of students in the class forum
- Edit profile (bio, credentials etc.)

**Table 9**: Proposed features for Tutors

#### Administrators features

- Add/remove classes
- Add/remove users
- Manage requests of tutors and students.
- Schedule Interviews with potential candidates for tutoring position

**Table 10**: Proposed features for Administrators

#### Project values

Although every website visited had unique features, features that overlapped should be the baseline present in our website as well. In contrast to Alloprof and Udemy, which both provide self-learning services, our website gives users the option to connect a tutor with a student based on their individual needs. While Udemy and Alloprof provide a basic teaching of a particular subject, they cannot promise they will be able to respond to a student's questions. By focusing on the users' areas of weakness and difficulty, our website ensures that students receive the aid they genuinely require.

Our features include the ability to filter for a specific subject, budget, course level. Our plans are also inclusive unlike other websites that don't offer a variety of subscription options. We offer two types of meetings depending on the student's budget: receive a one-on-one intensive meeting with the tutor or join a group teaching.

Another distinctive feature of our website is that tutors and students both have access to a calendar that lists all of the meeting dates, which is an important attribute that was missing in Liberty Tutoring as well as Super Prof. This helps both types of users stay organised and up to date with the lessons.

Another feature that sets our website apart is the availability of a list of popular university courses and their curriculum to all visitors without requiring them to sign up. Given that the course description is publicly displayed on our website, it differs from Liberty Tutoring in this regard.

On top of that, we also have a forum where students have the ability to post their questions for everyone to see and answer. The answer section is not limited to tutors but to other students as well, which can be really helpful in their own study sessions.

Additionally, there are specialised sites where tutors and students may sign up, however, most can access the majority of the website without doing so.

Furthermore, each website included features designed specifically for different user categories.

In terms of other advantages our system will have other than its distinct functionalities is that it will allow students to boost their GPA or receive extra help in their university courses and provide tutors a platform to teach and earn extra income. The system will also provide users a friendly interface, easy to navigate and comprehensive

Finally some pitfalls for us to avoid is not accounting for French or English as this severely affects the customer base of the website (as specially considering we are Quebec based).

## References

- [1] https://www.alloprof.qc.ca/
- [2] https://www.udemy.com/
- [3] https://www.libertytutoring.ca/
- [4] https://www.superprof.ca/