EPICUR
EUROPEAN UNIVERSITY

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# EPICUR
# European Partnership for an Innovative Campus Unifying Regions

## EPICUR Inter University Campus (EIUC)

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# Introduction

This document is presenting the EPICUR Inter University Campus (EIUC) and it is an output of the pilot phase of EPICUR Alliance[1] (2019-2022).

The EPICUR Inter-University Campus is a central online gateway (Figure 1) for supporting flexible virtual, physical and hybrid mobilities for all students and staff across the alliance. One of its unique features is its fully digitalized, paper-free process for student admissions that is supported by a secure, scalable and transparent solution based on free and open-source software. Furthermore, EIUC offers innovative functionality to monitor mobilities, issue and recognize certifications (including ECTS and micro-credentials).

*Figure 1: EPICUR Inter-University Campus is a central online gateway*

This guide has been written to provide a general introduction to the EPICUR Inter-University Campus design and functionalities. The intended target audience includes experts on digitalization of Higher Education Institutions as well as learning technology experts.

The following sections are presenting the high-level architecture of the EPICUR Inter-University Campus and its main components (a) the Virtual University Registrar System (VURS) and (b) the Virtual Campus Learning Platform (VCLP).

[1] EUIC has been developed in the context of Work Package 4 "WP4-Pave the way for an Inter-University Campus, using a student (and staff) centred approach" lead by Aristotle University of Thessaloniki (AUTh) and especially by the following tasks and deliverables: (a) Task 4.2.1 – Initial design and creation of the Virtual Campus Learning Platform (VCLP), D4.1.2: Procedures for evaluating courses and monitor mobility (led by KIT); (b) Task 4.2.3: Guidelines and design for a Virtual University Registrar System (VURS), D4.2.3: Guidelines and design for a Virtual University Registrar System (VURS) (lead by AUTh).

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# 1 High level EIUC architecture

This paragraph is presenting a high-level architecture of the EPICUR Inter-University Campus and the main VURS components.

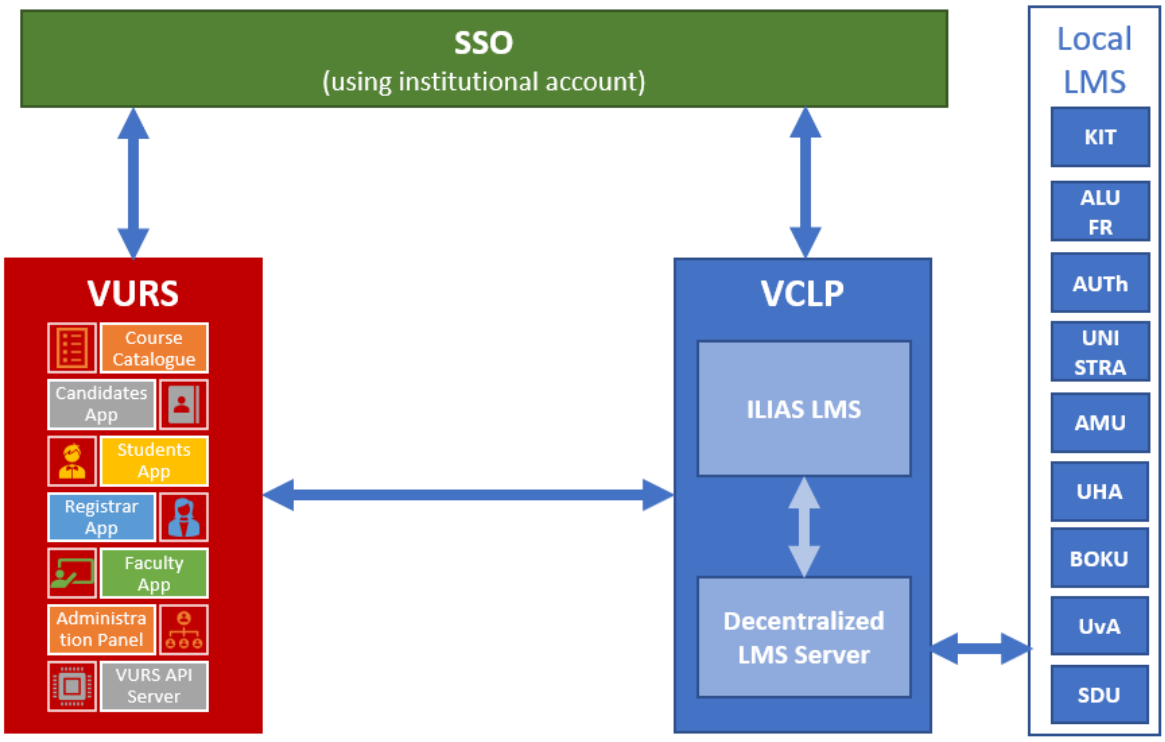


*Figure 2: EIUC high level architecture*

The main EIUC components are the following (Figure 2):

- Single Sign On (**SSO**) Services in order for the users to have access with their institutional account.
- Virtual University Registrar System (**VURS**): Centralised Campus Management System/Student Information System (CMS/SIS) keeping the necessary information for the students' mobilities and services. The main VURS Components are the following:
  - Course Catalogue (https://courses.epicur.auth.gr): Public course catalogue of all learning pathways offered to the EPICUR students.
  - Candidates App (https://register.epicur.auth.gr/): The application for the prospective students to apply for participation in the EPICUR learning pathways.
  - Students App (https://students.epicur.auth.gr/): The application for the selected students attending the EPICUR learning pathways.
  - Registrar App (https://registrar.epicur.auth.gr/): The application for the administrative staff to monitor EPICUR learning pathways and students mobilities.
  - Faculty App (https://faculty.epicur.auth.gr/): The application for the teaching staff delivering a course that is part of an EPICUR learning pathway.
  - Admin Panel (https://registrar.epicur.auth.gr/): A specific part of the application for the Registrar App to admin the rights and roles of the rest of the users.
  - VURS API Server: The core service interacting with all the apps above and the VCLP component.
- Virtual Campus Learning Platform (**VCLP**) accessible at https://learn.epicur.education: It is the Learning Management System (LMS) of EPICUR along with a Decentralised LMS server acting as gateway to local LMSs of the partners. The VCLP is a full Learning Management System, which is

based on ILIAS. ILIAS[2] is an open-source and free Learning Management System, which is popular in Germany and Switzerland. Both German universities of the EPICUR alliance are using ILIAS as their main Learning Management System. ILIAS is completely web-based, hence requires only a web browser on the client side to use it. It supports learning content management and tools for collaboration, communication, evaluation and assessments. It is published under the GNU General Public License. The functionality of ILIAS can also be extended with Plug-Ins. There exists a variety of free and commercial Plug-Ins for ILIAS, adding missing functionality for specific cases. As the VCLP is a complete Learning Management System, courses can be directly hosted on the VCLP itself. However, since the VCLP is based on ILIAS, it can also be integrated with other LMS by connecting the LMS to one or more "Decentralized LMS servers".

The following sections are presenting the functionality supported by VURS and VCLP.

# 2 Virtual University Registrar System (VURS)

## 2.1 Introduction

As described before VURS has the following main components that can be accessed by its specific webpage (Figure 3):

- Course Catalogue
- Candidates App
- Students App
- Registrar App
- Faculty App
- Admin Panel

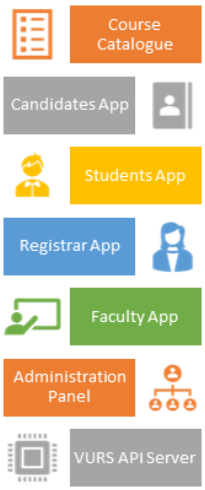


*Figure 3: VURS components*

Table 1 presents and overview of VURS Roles and Rights per Component.

*Table 1: Overview of VURS Roles and Rights per Component*

| **Component** | **Roles/Rights** |
|---|---|
| **Course Catalogue** | Guest / Open access to everyone |
| **Candidates App** | Candidate /Every user of the local partner universities; S/he can apply for a mobility |
| **Students App** | EPICUR student / Student that has been selected to at least one EPICUR mobility and can track his records and communicate with the professors. |

[2] https://www.ilias.de/

| | |
|---|---|
| **Registrar App** | Administrative staff / Creation of mobilities and courses; admission of students |
| **Faculty App** | Teaching staff / Grading and communication with the students |
| **Admin Panel** | Administrator / Responsible for:<br>• data consistency;<br>• bug fixes;<br>• analytics reports;<br>• site reliability. |

This section presents the most important VURS interfaces as they have been already developed according to the required functionality. Along with the system interfaces the specific system functionality are described using the template presented in Table 2.

*Table 2: Template for Functionalities*

| | |
|---|---|
| **Functionality Name** | Name of the functionality |
| **Actors** | Users or system components that will use this functionality |
| **Input Data** | Data needed for the implementation |
| **Description** | Process that will be followed for the achievement of the functionality |
| **Output Data** | Expected result |

## 2.2 Access and Registration / Login

### *2.2.1 Access to the VURS*

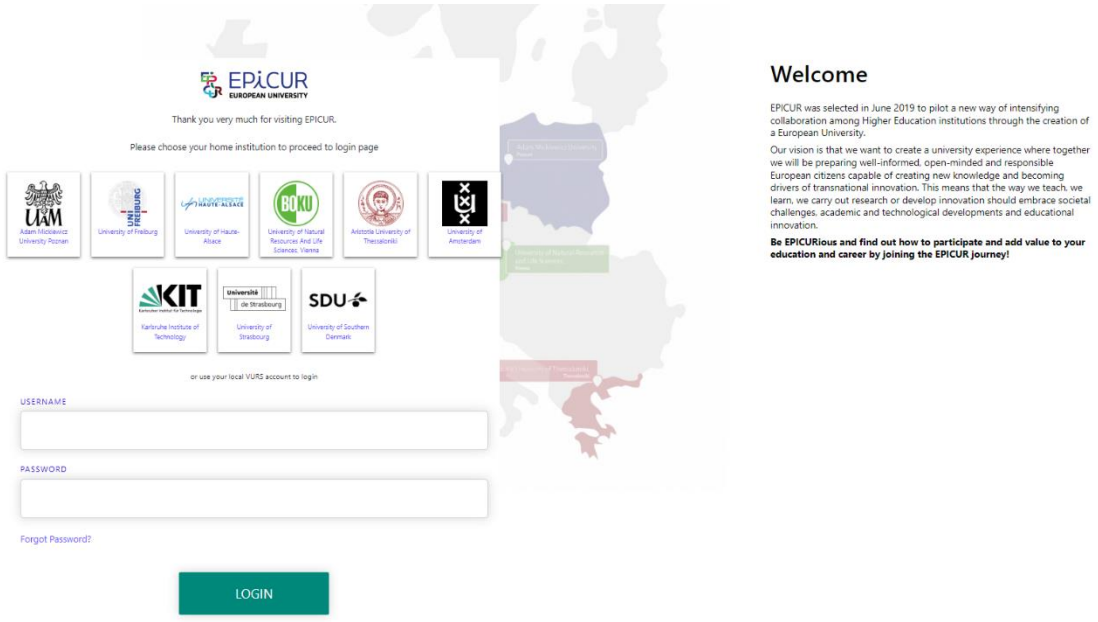


*Figure 4: Access to the VURS functionality*

*Table 3: Access to the VURS functionality*

| | |
|---|---|
| **Functionality Name** | Access to the VURS |
| **Actors** | All Users |
| **Input Data** | Credentials in any institution of EPICUR partners |
| **Description** | The user |

| | |
|---|---|
| | • visits the application of EPICUR VURS that corresponds to the user group to which he/she belongs<br>• is being redirected to Authorization Server of VURS in order to get access to the VURS functionalities where there are buttons icons of all the EPICUR partners' institutions and a login form<br>• selects the institution in which has an account, and he/she is being redirected to the login page of the selected institution<br>• After filling the correct credentials, is being redirected to the main page of VURS |
| **Output Data** | When the user clicks on an institution the message "Redirecting, please wait." appears until he/she is being redirected to the institution's login page. After validating user's credentials, the loading page displays to redirect the user to the main page (dashboard) of the VURS EPICUR. If the user puts invalid credentials in the login form, the message "Invalid username or password." appears. |

## 2.3 Registrar

### *2.3.1 Preview Main Information*

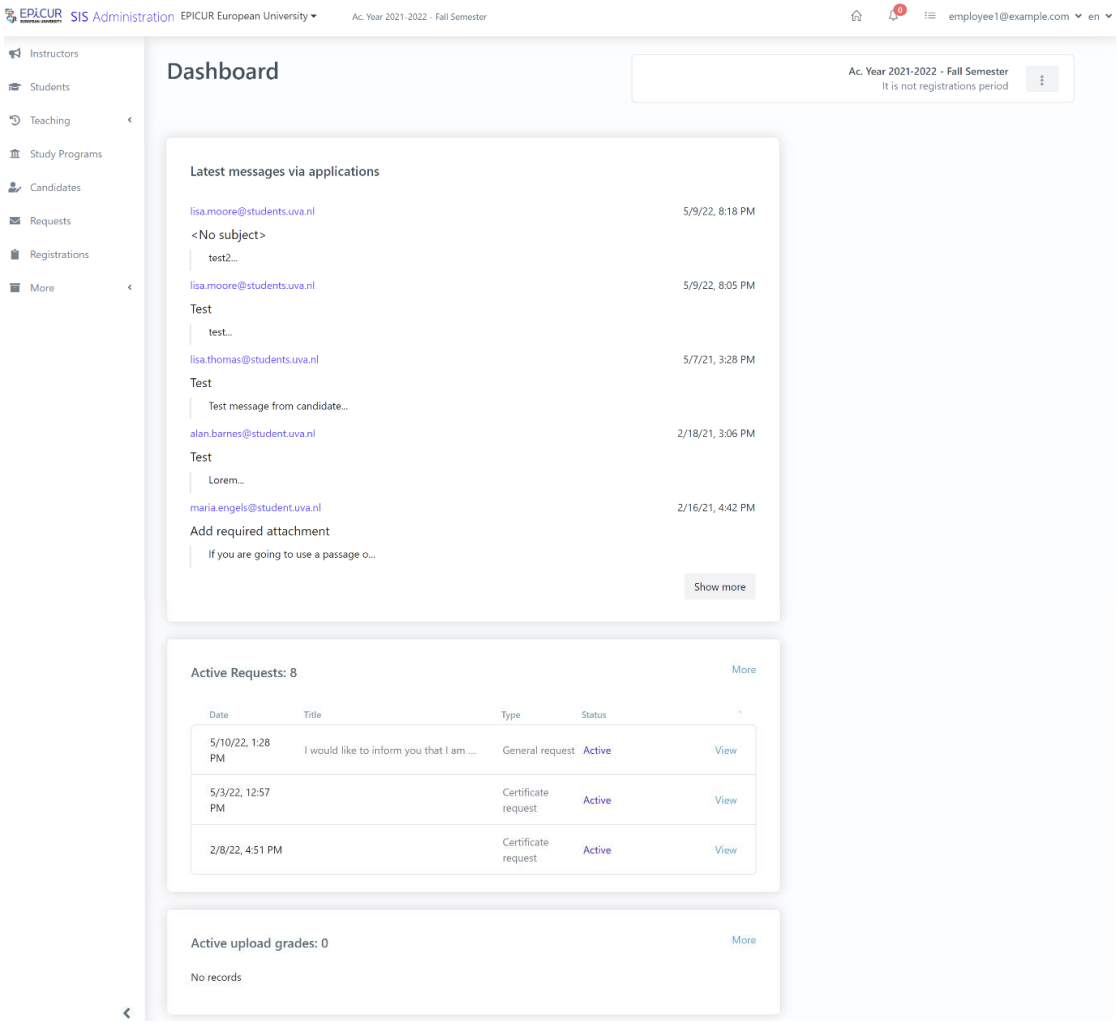


*Figure 5: Preview Main Information functionality*

*Table 4: Preview Main Information functionality*

| | |
|---|---|
| **Functionality Name** | Preview Main Information |

| | |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | - |
| **Description** | The user can view main entities of EPICUR VURS by selecting the home icon from the VURS's menu bar |
| **Output Data** | The page with the main entities of EPICUR VURS is loaded which are: latest messages via applications, active requests, exam participate requests, active upload grades. |

### *2.3.2 Search Lecturer*

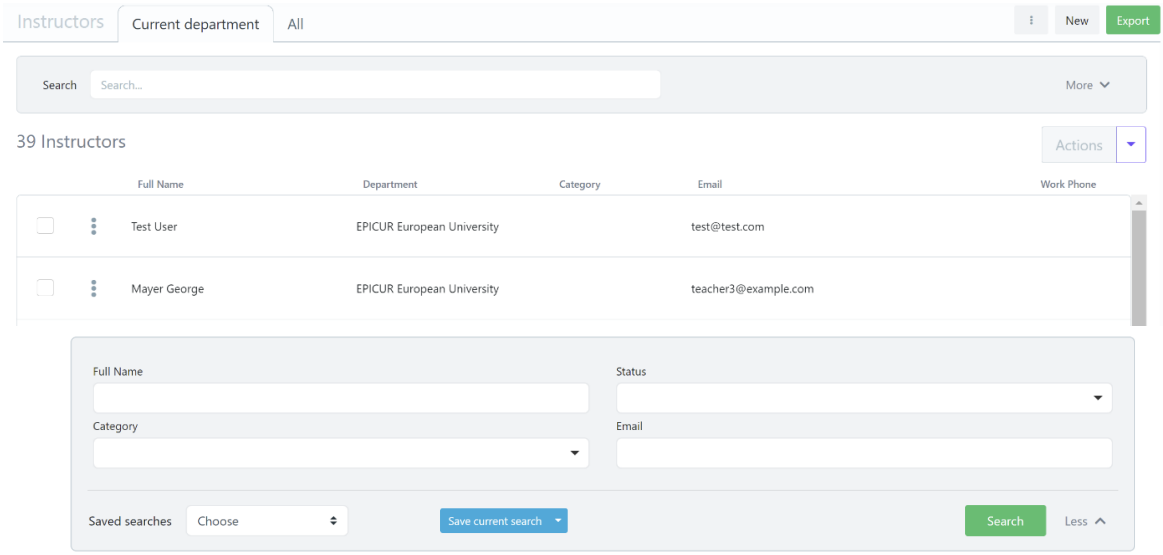


*Figure 6: Search Lecturers functionality: a) List of Lecturers, b) Full search criteria*

*Table 5: Search Lecturers functionality*

| | |
|---|---|
| **Functionality Name** | Search Lecturers |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Full name, Status, Category. Email<br>**Send message action**:<br>Required: Subject, Write a short message |
| **Description** | The user can search a group of lecturers or a specific lecturer by following the steps:<br>1. selects the **Instructors** option from the VURS's sidebar menu<br>2. selects between current department lecturers (default option) and all lecturers from the tabs section<br>3. finds the group of lecturers or a specific lecturer on the list of instructors by searching/filtering lecturers (by Full name, Status, Category. Email) and by sorting them (by Full name, Department, Category. Email, Work Phone)<br>**To communicate with lecturer(s)**:<br>4. check box next to each lecturer<br>5. clicks arrow button next to Actions<br>6. selects **Send message** option<br>7. completes the message form (Subject, Write a short message) and sends it |
| **Output Data** | The list of the lecturers that satisfy the defined requirements appears in the |

| | |
|---|---|
| | **Instructors** page.<br>For “Send message” action, a loading bar appears and after the completion the popup form closes. |

### *2.3.3 Preview Lecturer*

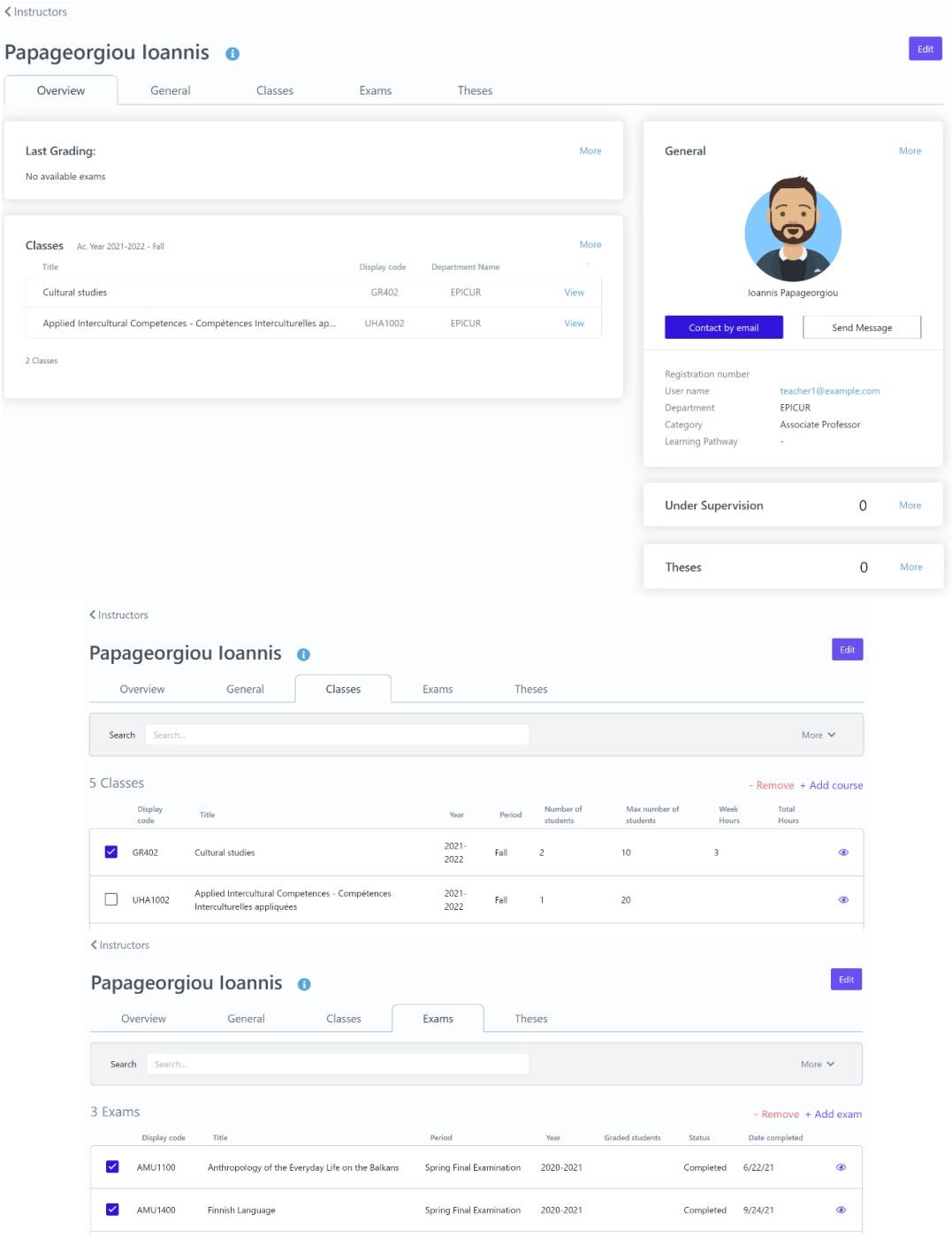


*Figure 7: Preview Lecturer functionality: a) Overview tab, b) Classes tab, c) Exams tab*

*Table 6: Preview Lecturer functionality*

| | |
|---|---|
| **Functionality Name** | Preview Lecturer |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Full name, Status, Category. Email |

| | |
|---|---|
| **Description** | The user can view a lecturer's information by following the steps:<br>1. searches for a specific lecturer on **Instructors** page<br>2. clicks on the 3 dots next to the lecturer's name<br>3. selects **Preview** option<br>**Add class action**:<br>4. selects **Classes** tab<br>5. clicks **+ Add course** button<br>6. selects course(s) by checking box(es) and clicks **Apply** button<br>**Remove class action**:<br>4. selects **Classes** tab<br>5. selects course(s) by checking box(es)<br>6. clicks **- Remove** button<br>7. clicks **OK** button on the confirmation popup window<br>**Add exam action**:<br>4. selects **Exams** tab<br>5. clicks **+ Add exam** button<br>6. selects exam(s) by checking box(es) and clicks **Apply** button<br>**Remove exam action**:<br>4. selects **Exams** tab<br>5. selects exam(s) by checking box(es) and click **Apply** button<br>6. clicks **- Remove** button<br>7. clicks **OK** button on the confirmation popup window |
| **Output Data** | The page with all the lecturer's information is loaded where there are four tabs: Overview, General, Classes, Exams, Theses.<br>Upon adding or removing classes/exams to a lecturer, a completion message appears and the list of classes/exams is updated. |

### *2.3.4 Insert Lecturer*

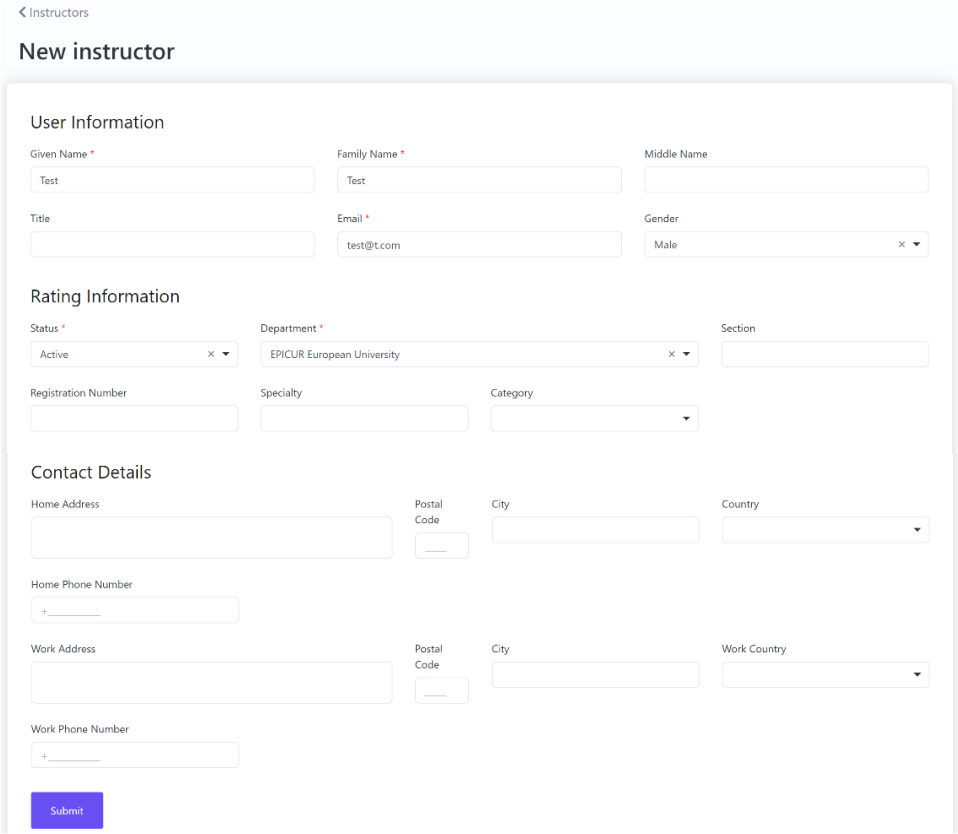


*Figure 8: Insert Lecturer functionality*

*Table 7: Insert Lecturer functionality*

| **Functionality Name** | Insert Lecturer |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • User Information:<br>  • Required: Given Name, Family Name, Email<br>  • Optional: Middle Name, Title, Gender<br>• Rating Information:<br>  • Required: Status, Department<br>  • Optional: Section, Registration Number, Specialty, Category<br>• Contact Details:<br>  • Optional: Home Address, Postal Code, City, Country, Home Phone Number, Work Address, Postal Code, City, Work Country, Work Phone Number |
| **Description** | The user can add a lecturer by following the steps:<br>1. selects the **Instructors** option from the VURS's sidebar menu<br>2. clicks the button **New**<br>3. completes the new instructor form and submits it<br>To be enabled the submit button, at least the required fields of the form needs to be completed. |
| **Output Data** | A completion popup message is shown after the user's submission and the lecturer would be in the instructors list. If the user has given an invalid email, he/she cannot process to the submission and an indication "Email must be a valid email." appears. |

### 2.3.5 *Edit Lecturer*

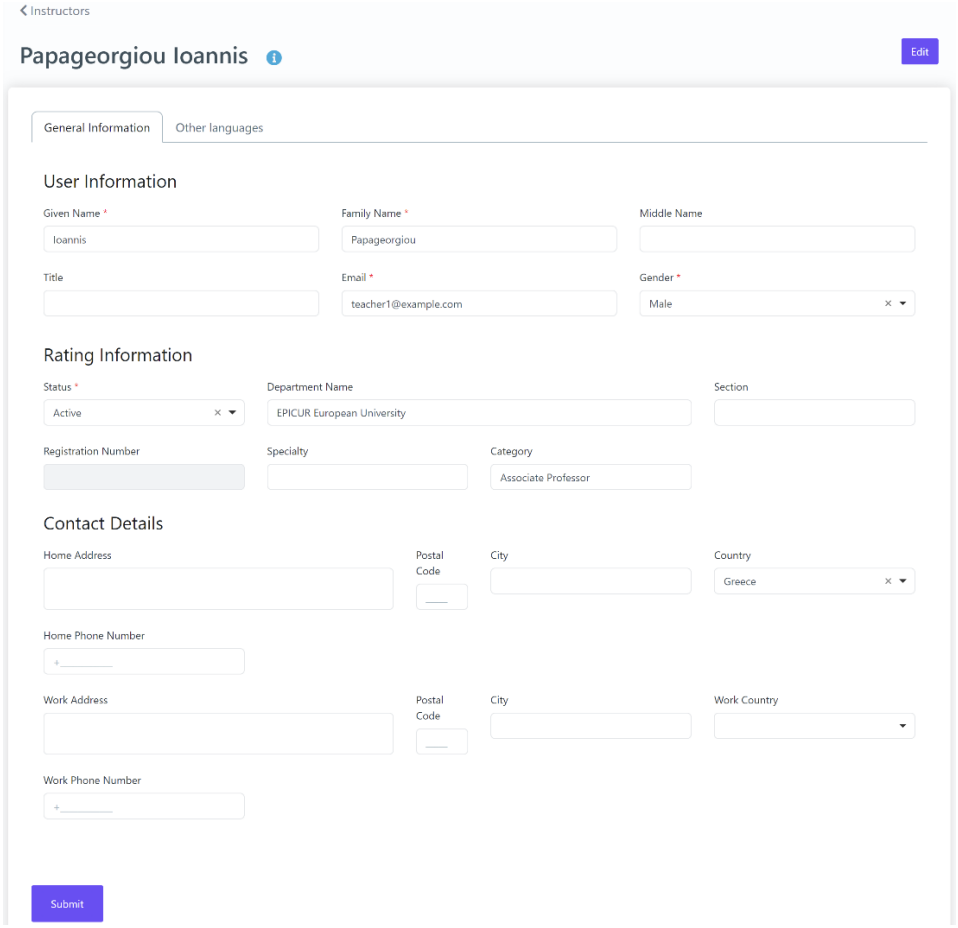


*Figure 9: Edit Lecturer functionality*

*Table 8: Edit Lecturer functionality*

| **Functionality Name** | Edit Lecturer |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **User Information:**<br>  • Required: Given Name, Family Name, Email<br>  • Optional: Middle Name, Title, Gender<br>• **Rating Information:**<br>  • Required: Status, Department<br>  • Optional: Section, Registration Number, Specialty, Category<br>• **Contact Details:**<br>  • Optional: Home Address, Postal Code, City, Country, Home Phone Number, Work Address, Postal Code, City, Work Country, Work Phone Number |
| **Description** | The user can change a lecturer's information by following the steps:<br>1. searches for a specific lecturer on **Instructors** page<br>2. clicks on the 3 dots next to the lecturer's name<br>3. selects **Edit** option. There is also an **Edit** button in the lecturer's preview page.<br>4. changes lecturer's information by editing his/her form and submits it |

| | |
|---|---|
| **Output Data** | A completion popup message is shown after the user's submission and the lecturer's preview page appears. |

### *2.3.6 Search Students*

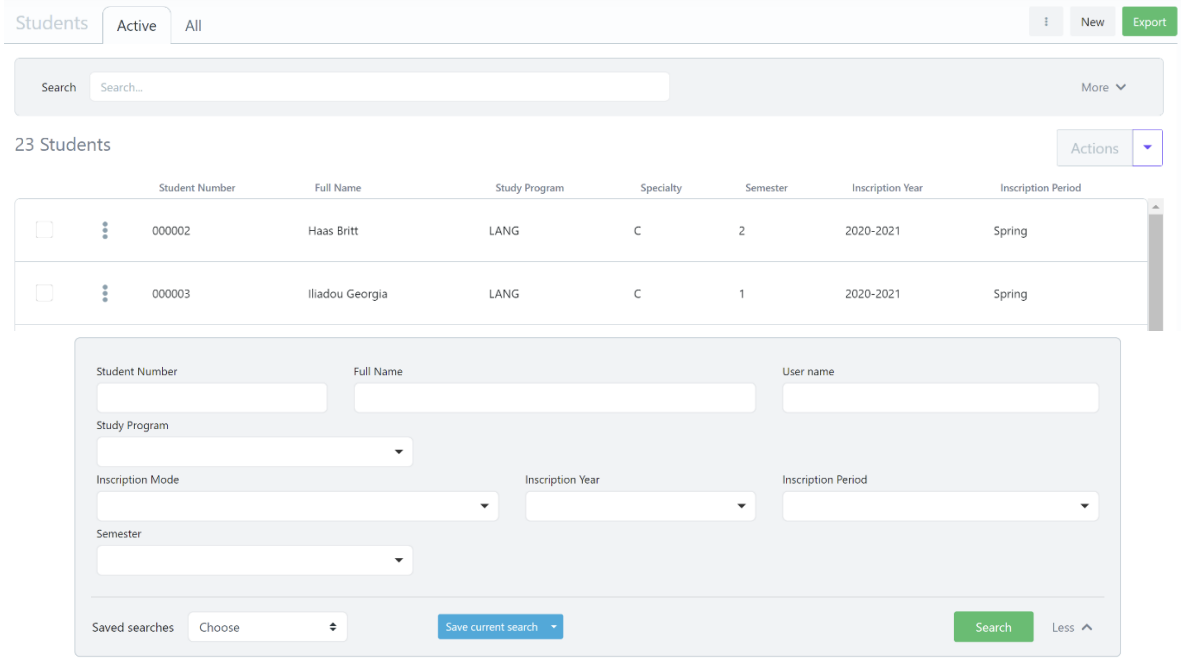


*Figure 10: Search Students functionality: a) List of Students, b) Full search criteria*

*Table 9: Search Students functionality*

| | |
|---|---|
| **Functionality Name** | Search Students |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Student number, Full name, User name, Study program, Inscription mode, Inscription year, Inscription Period, Semester<br>**Send message action**:<br>• Required: Subject, Write a short message |
| **Description** | The user can search a group of lecturers or a specific lecturer by following the steps:<br>1. selects the **Students** option from the VURS's sidebar menu<br>2. selects between active students (default option) and all students from the tabs section<br>3. finds the group of students or a specific student on the list of students by searching/filtering students (by Student number, Full name, User name, Study program, Inscription mode, Inscription year, Inscription Period, Semester) and by sorting them (by Student number, Full name, Study program, Specialty, Semester, Inscription year, Inscription Period)<br>**To communicate with student(s)**:<br>4. check box next to each student<br>5. clicks arrow button next to Actions<br>6. selects **Send message** option completes the message form (Subject, Write a short message) and sends it<br><br>The user can also perform the actions for student(s) (by selecting student(s) |

| | |
|---|---|
| | and clicking arrow button next to Actions): Calculate semester Change study program, Change specialty, Add program group, Request document. |
| **Output Data** | The list of the students that satisfy the defined requirements appears in the **Students** page.<br>For "Send message" action, a loading bar appears and after the completion, the popup form closes. |

### *2.3.7 Preview Student*

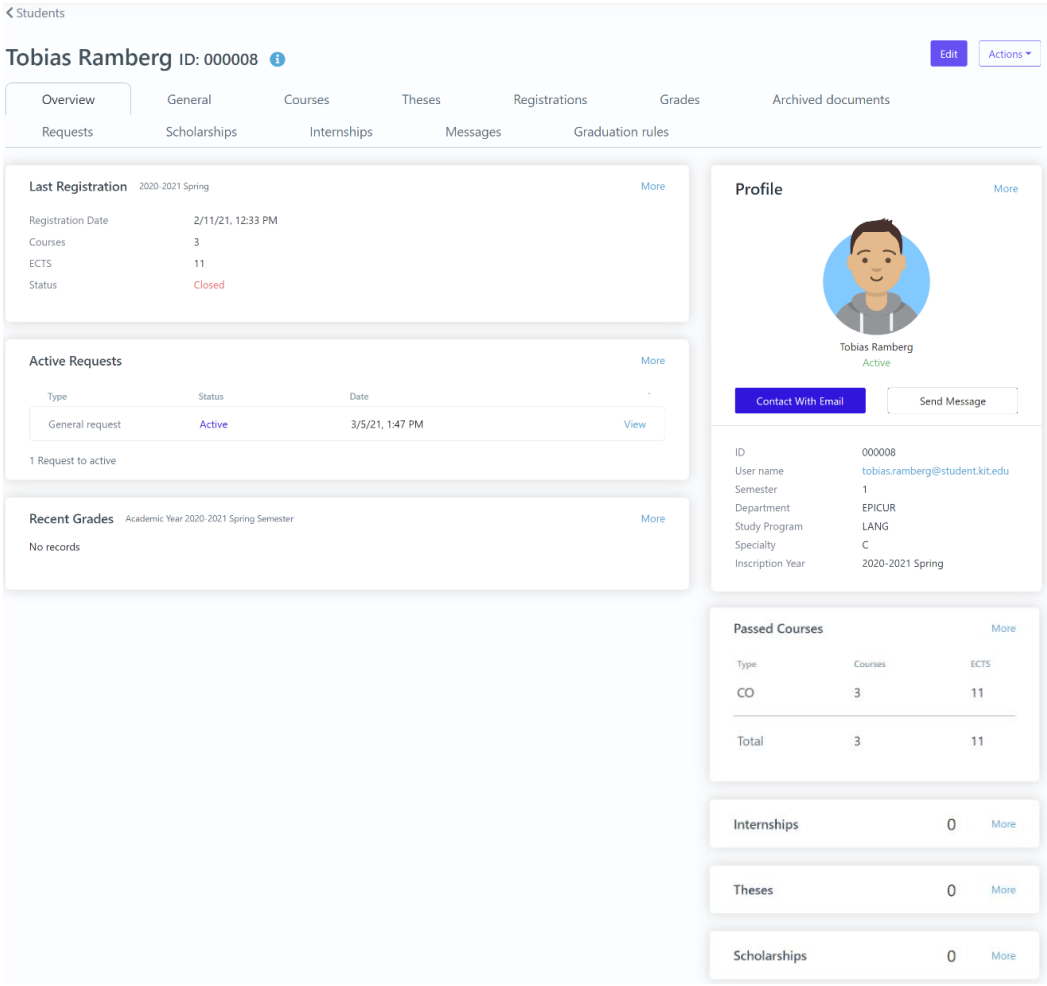


*Figure 11: Preview Student functionality*

*Table 10: Preview Student functionality*

| | |
|---|---|
| **Functionality Name** | Preview Student |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Student number, Full name, User name, Study program, Inscription mode, Inscription year, Inscription Period, Semester<br>**Send message action**:<br>• Required: Subject, Body<br>• Optional: Attach files |
| **Description** | The user can view a student's information by following the steps:<br>1. searches for a specific student on **Students** page<br>2. clicks on the 3 dots next to the student's name<br>3. selects **Preview** option |

| | |
|---|---|
| | **To communicate with student**:<br>4. clicks **Send message** button on Profile section<br>5. completes the message form (Subject, Body, Attach files) and sends it<br>6. clicks **OK** button on confirmation window. There is the option to send email to student by clicking **Contact With Email** button, too<br>The user can also perform the actions (by clicking **Actions** button): Preview study program, Request for student removal, Request for student suspension, Export report, New internship, Request document. |
| **Output Data** | The page with all the student's information is loaded where there are twelve tabs: Overview, General, Courses, Theses, Registrations, Grades, Archived documents, Requests, Scholarships, Internships, Messages, Graduation rules.<br>For "Send message" action, a completion popup message shows up. |

### *2.3.8 Edit Student*

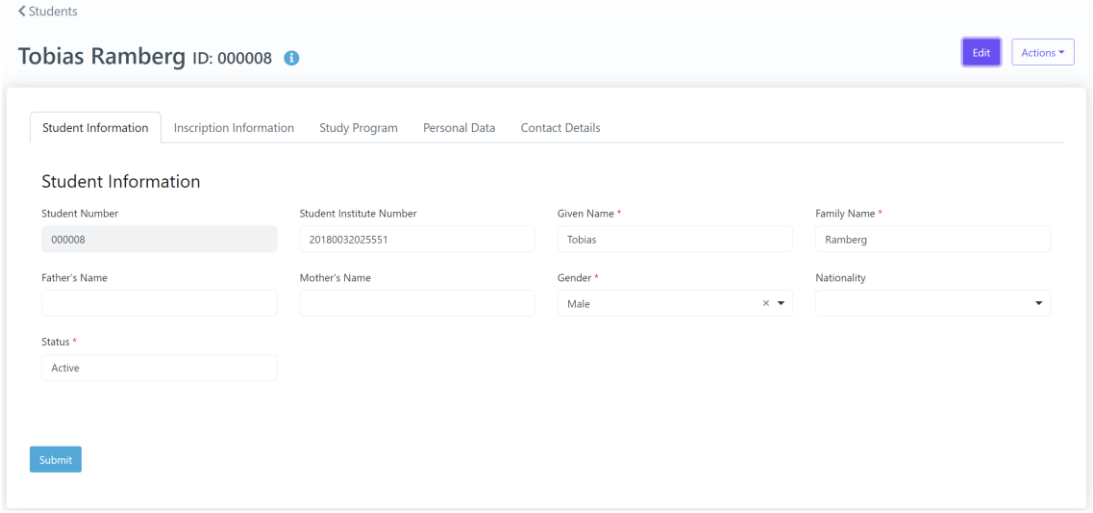


*Figure 12: Edit Student functionality*

*Table 11: Edit Student functionality*

| | |
|---|---|
| **Functionality Name** | Edit Student |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **Student Information:**<br>  • Required: Given Name, Family Name, Gender, Status<br>  • Optional: Student Institute Number, Father's Name, Mother's Name, Nationality<br>• **Inscription Information:**<br>  • Required: Inscription Year, Inscription Period, Inscription semester, Inscription date, Inscription mode<br>  • Optional: Inscription Mode Category, Inscription index, Inscription decision, Inscription Number, Inscription points, Home institute, Home department/faculty, Home department/faculty description, Inscription Comments<br>• **Study Program:**<br>  • Required: Department<br>  • Optional: Study Program |

| | |
|---|---|
| | • **Personal Data:**<br>  • Optional: Citizen Information (Identity Card, Identity Type, Identity Date, Identity Authority, Citizen Registrar, Citizen Registrar Place, Citizen Registrar Region, Vat Number, Vat Office, SSN), Personal Information (Birth Date, Birth Place, Country, Birth Place Region, Spouse Name, Family Status, Military Status)<br>• **Contact Details:**<br>  • Optional: Home Contact Details (Country, Region, Postal Code, City, Address, Phone, Mobile Phone, Email), Temporary Contact Details (Country, Region, Postal Code, City, Address, Phone) |
| **Description** | The user can change a student's information by following the steps:<br>1. searches for a specific student on **Students** page<br>2. clicks on the 3 dots next to the student's name<br>3. selects **Edit** option. There is also an **Edit** button in the student's preview page.<br>4. changes student's information by editing his/her form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the student's preview page appears. |

### *2.3.9 Document request on behalf of student*

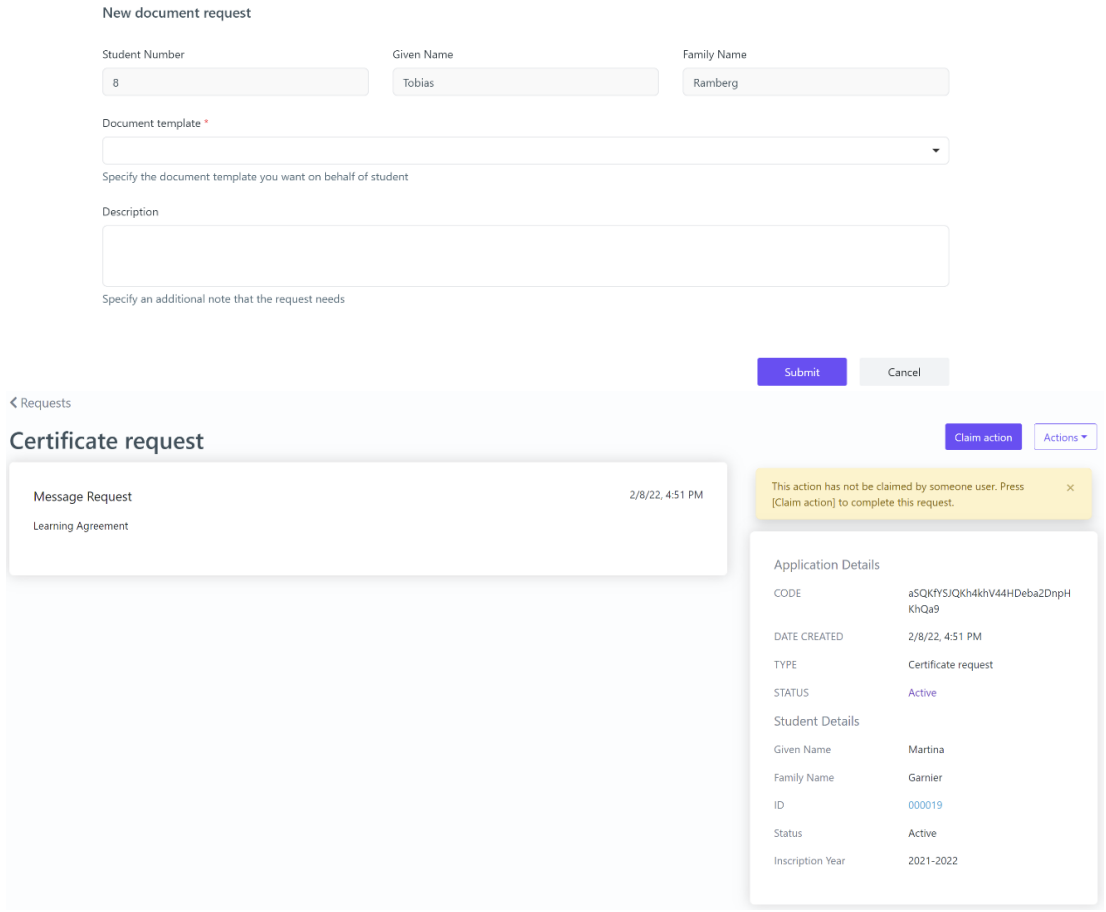


*Figure 13: Document request on behalf of student functionality: a) request form, b) incomplete request*

*Table 12: Document request on behalf of student functionality*

| | |
|---|---|
| **Functionality Name** | Document request on behalf of student |

| | |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • Required: Document Template<br>• Optional: Description |
| **Description** | The user can request for a document on behalf of a student by following the steps:<br>1. searches for a specific student on **Students** page<br>2. clicks on the 3 dots next to the student's name<br>3. selects **Preview** option<br>4. selects **Request document** option from **Actions** button<br>5. completes the form and submits it |
| **Output Data** | If the user has not selected the document template which is necessary, the message "Document type is missing" appears and the submission is not completed. Otherwise, the request page is loaded and the message "This action has not be claimed by someone user. Press [Claim action] to complete this request." is shown. Claim action button finalize the document request. |

### *2.3.10 Export student's report*

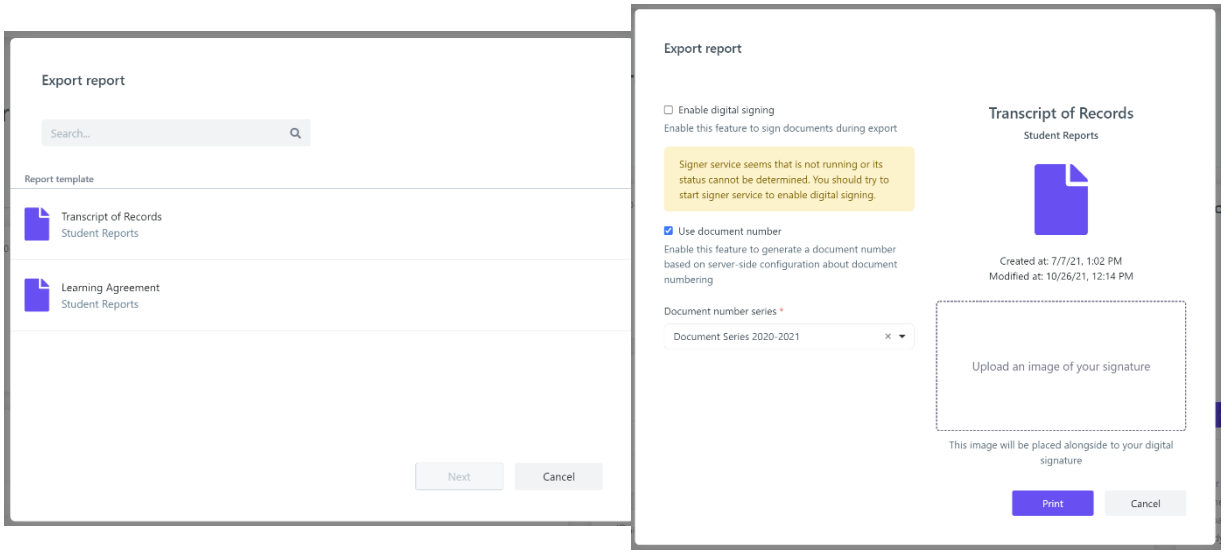


*Figure 14: Export student's report functionality*

*Table 13: Export student's report functionality*

| | |
|---|---|
| **Functionality Name** | Export student's report |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • Required: Report Template, Document number series<br>• Optional: Digital signing, Document number, Image of signature |
| **Description** | The user can export a student's report by following the steps:<br>1. searches for a specific student on **Students** page<br>2. clicks on the 3 dots next to the student's name<br>3. selects **Preview** option<br>4. selects **Export report** option from **Actions** button<br>5. selects report template and the **Next** button is enabled<br>6. chooses if wants to enable digital signing, use of document number and upload an image of signature. Then, clicks **Print** button to export the report. If the feature use document number is enabled the document number series is required and the print button is disabled. |

| | |
|---|---|
| **Output Data** | The report is loaded and there are three options: download file, print file or close it to return in the previous page. |

### *2.3.11 Search Courses*

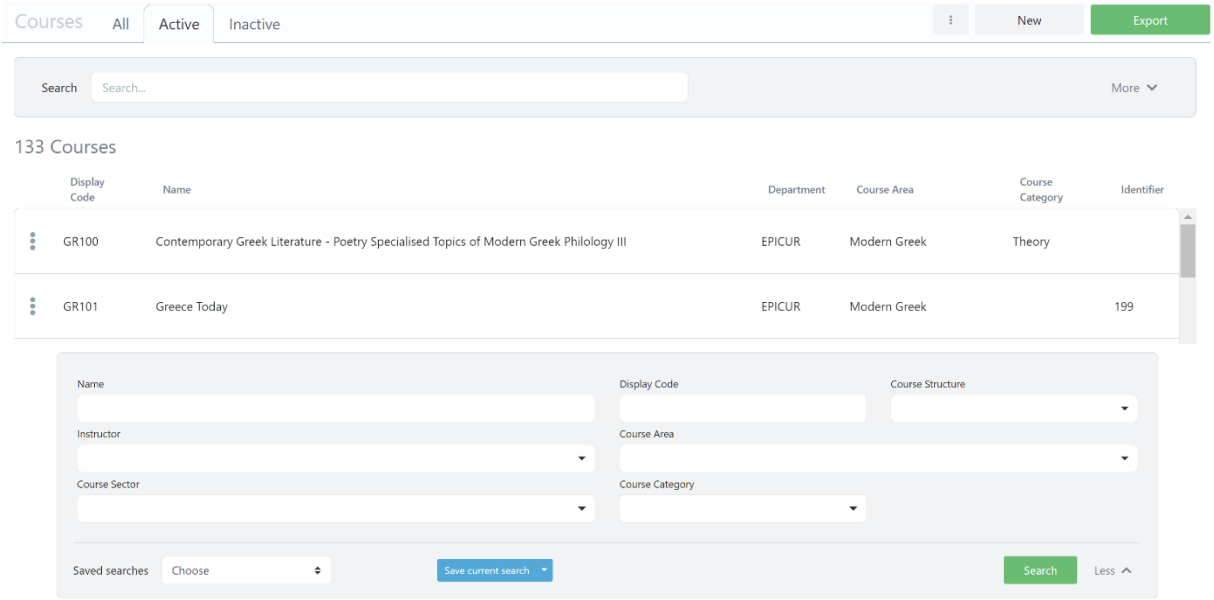


*Figure 15: Search Courses functionality: a) List of Courses, b) Full search criteria*

*Table 14: Search Courses functionality*

| | |
|---|---|
| **Functionality Name** | Search Courses |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Name, Display Code, Course Structure, Instructor, Course Area, Course Sector, Course Category |
| **Description** | The user can search a group of courses or a specific course by following the steps:<br>1. selects the **Teaching->Courses** option from the VURS's sidebar menu<br>2. selects between all courses, active courses (default option) and inactive courses from the tabs section<br>3. finds the group of courses or a specific course on the list of courses by searching/filtering courses (by Name, Display Code, Course Structure, Instructor, Course Area, Course Sector, Course Category) and by sorting them (by Display Code, Name, Department, Course Area, Course Category, Identifier) |
| **Output Data** | The list of the courses that satisfy the defined requirements appears in the **Courses** page. |

### *2.3.12 Preview Course*

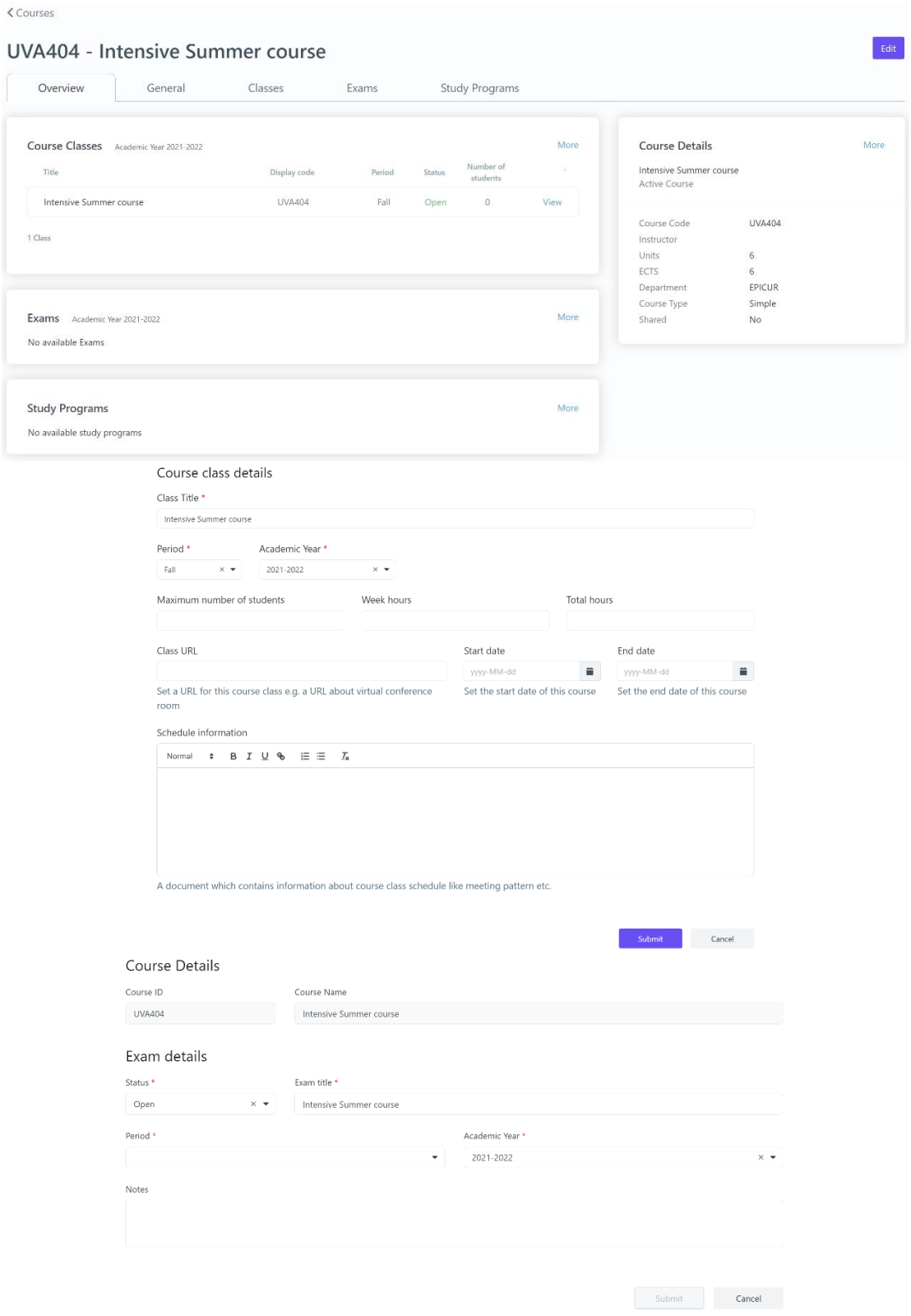


*Figure 16: Preview Course functionality: a) Overview tab, b) Add class form, c) Add exam form*

*Table 15: Preview Course functionality*

| **Functionality Name** | Preview Course |
|---|---|
| **Actors** | Administrators, Registrar Users |

| | |
|---|---|
| **Input Data** | Optional: Name, Display Code, Course Structure, Instructor, Course Area, Course Sector, Course Category,<br>**Add class action**:<br>– Required: Class Title, Period, Academic Year<br>– Optional: Maximum number of students, Week hours, Total hours, Class URL, Start date, End date, Schedule information<br>**Add exam action**:<br>– Required: Status, Exam title, Period, Academic Year<br>– Optional: Notes |
| **Description** | The user can view a course's information by following the steps:<br>1. searches for a specific course on **Courses** page<br>2. clicks on the 3 dots next to the course<br>3. selects **Preview** option<br>**Add class action**:<br>4. selects **Classes** tab<br>5. clicks **+ Add class** button<br>6. completes course class details form and clicks **Submit** button<br>**Add exam action**:<br>4. selects **Exams** tab<br>5. clicks **+ Add exam** button<br>6. completes exam details form and clicks **Submit** button |
| **Output Data** | The page with all the course's information is loaded where there are five tabs: Overview, General, Classes, Exams, Study Programs.<br>Upon adding classes/exam, a completion message appears and the list of classes/exams is updated. |

### *2.3.13 Create Course*

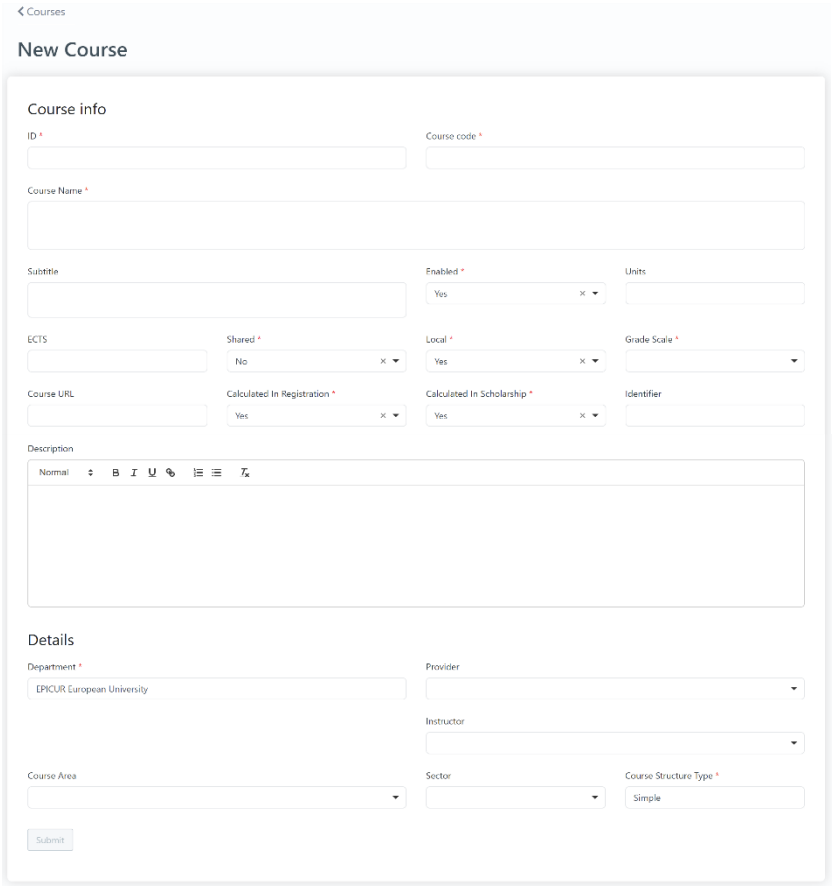


*Figure 17: Create Course functionality*

*Table 16: Create Course functionality*

| **Functionality Name** | Create Course |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **Course info**:<br>– Required: ID, Course code, Course Name, Enabled, Shared, Local, Grade Scale, Calculated In Registration, Calculated In Scholarship<br>– Optional: Subtitle, Units, ECTS, Course URL, Identifier, Description<br>• **Details**:<br>– Required: Department, Course Structure Type<br>– Optional: Provider (Provider department/faculty), Instructor, Course Area, Sector |
| **Description** | The user can create a new course by following the steps:<br>1. selects the **Teaching->Courses** option from the VURS's sidebar menu<br>2. clicks the button **New**<br>3. completes the new course form and submitting it<br>To be enabled the submit button, at least the required fields of the form needs to be completed. |
| **Output Data** | A completion popup message is shown after the user's submission and the course would be in the courses list. |

### *2.3.14 Edit Course*

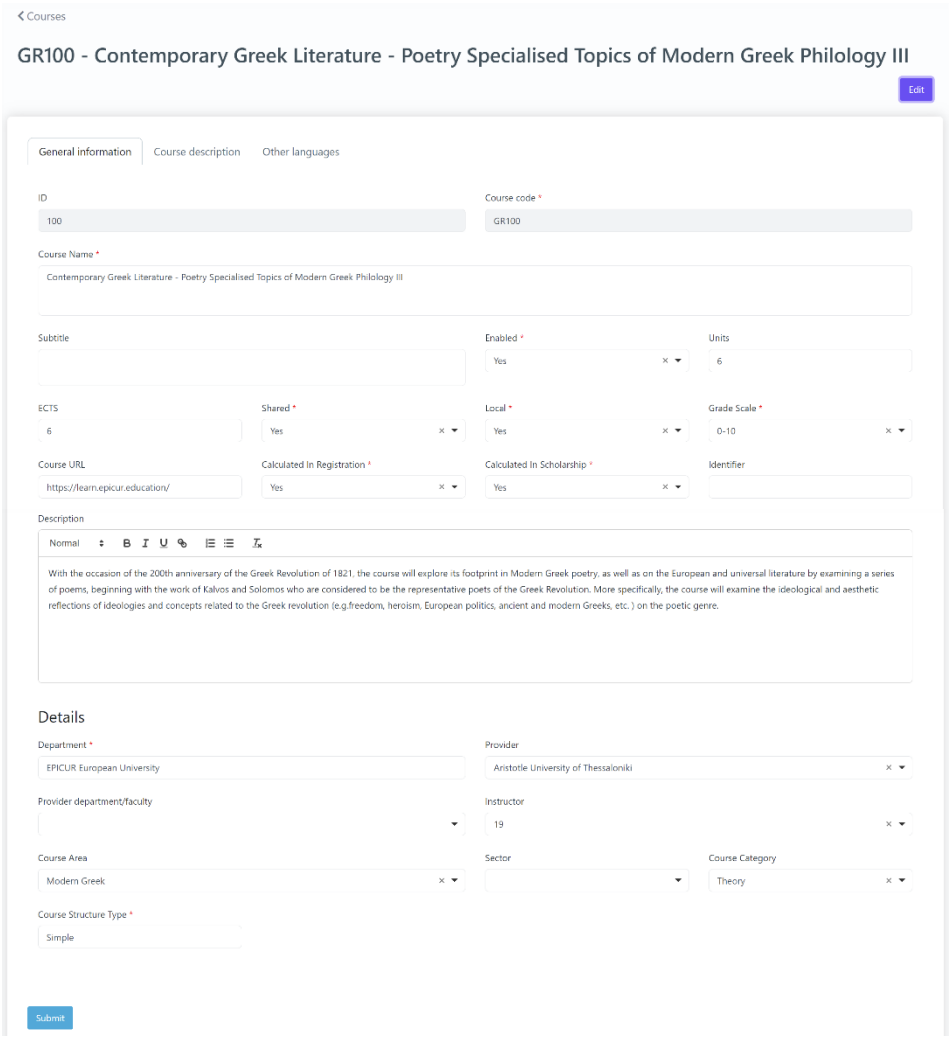


*Figure 18: Edit Course functionality*

*Table 17: Edit Course functionality*

| **Functionality Name** | Edit Course |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **General information:**<br>  • Required: ID, Course code, Course Name, Enabled, Shared, Local, Grade Scale, Calculated In Registration, Calculated In Scholarship, Details (Department, Course Structure Type)<br>  • Optional: Subtitle, Units, ECTS, Course URL, Identifier, Description, Details (Provider, Instructor, Course Area, Sector)<br>• **Course description:**<br>  • Optional: Course syllabus, Learning outcome, General competencies, Additional information, Additional course url, Language of instruction, Focus language, Bibliography |
| **Description** | The user can change a course's information by following the steps:<br>1. searches for a specific course on **Courses** page<br>2. clicks on the 3 dots next to the specific course<br>3. selects **Edit** option. There is also an **Edit** button in the course's preview page.<br>4. changes course's information by editing the form and submits it |

| | |
|---|---|
| **Output Data** | A completion popup message is shown after the user's submission and the course's preview page appears. |

### *2.3.15 Search Classes*

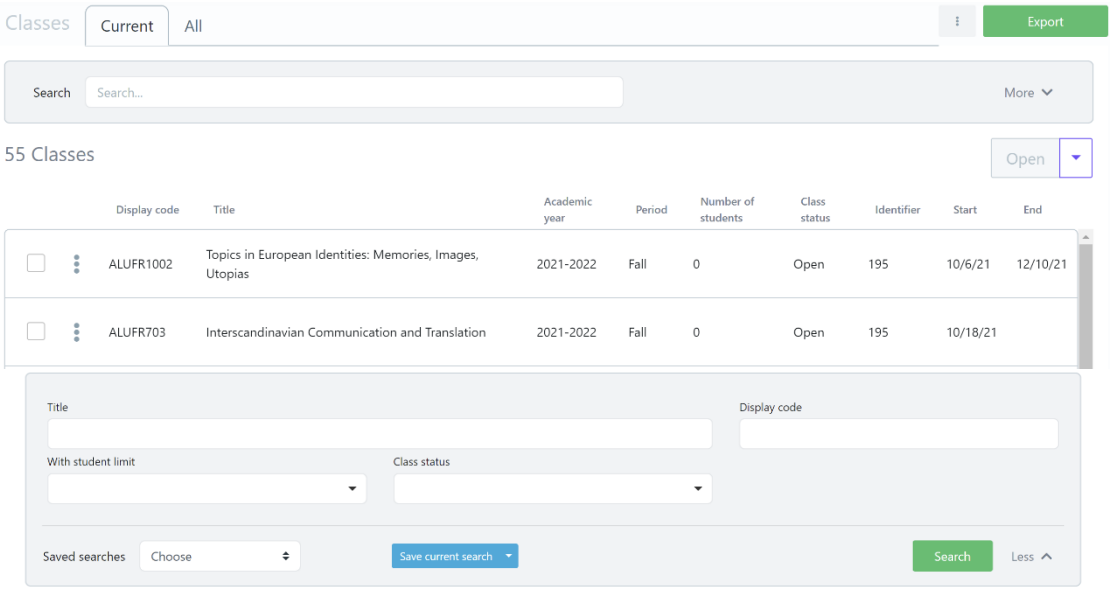


*Figure 19: Search Classes functionality: a) List of Classes, b) Full search criteria*

*Table 18: Search Classes functionality*

| | |
|---|---|
| **Functionality Name** | Search Classes |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Title, Display Code, With student limit, Class status |
| **Description** | The user can search a group of classes or a specific class by following the steps:<br>1. selects the **Teaching->Classes** option from the VURS's sidebar menu<br>2. selects between current classes (default option) and all classes from the tabs section<br>3. finds the group of classes or a specific class on the list of classes by searching/filtering classes (by Title, Display Code, With student limit, Class status) and by sorting them (by Display Code, Title, Academic year, Period, Number of students, Class status, Identifier, Start, End)<br><br>The user can also perform the actions for class(es) (by selecting class(es) and clicking arrow button next to Open): Open, Close, Copy, Delete, Create exams. |
| **Output Data** | The list of the classes that satisfy the defined requirements appears in the **Classes** page. |

### 2.3.16 *Preview Class*

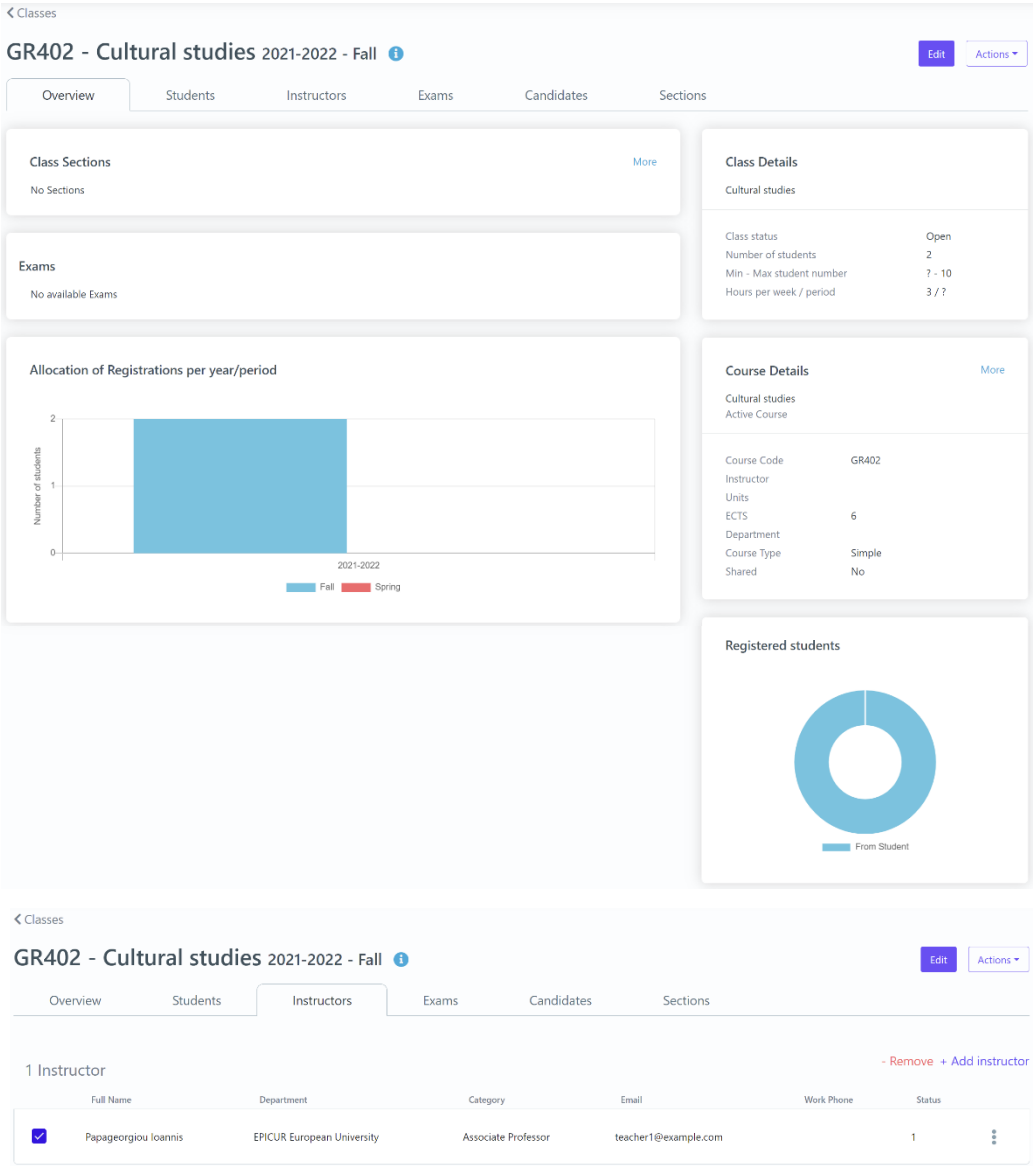


*Figure 20: Preview Class functionality: a) Overview tab, b) Instructors tab*

*Table 19: Preview Class functionality*

| **Functionality Name** | Preview Class |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Title, Display Code, With student limit, Class status |
| **Description** | The user can view a class's information by following the steps:<br>1. searches for a specific class on **Classes** page<br>2. clicks on the 3 dots next to the class<br>3. selects **Preview** option<br>**Add lecturer action**:<br>4. selects **Instructors** tab<br>5. clicks **+ Add instructor** button<br>6. selects lecturer(s) by checking box(es) and clicks **Apply** button<br>**Remove lecturer action**:<br>4. selects **Instructors** tab |

| | |
|---|---|
| | 5. selects lecturer (s) by checking box(es)<br>6. clicks - **Remove** button<br>7. clicks **OK** button on the confirmation popup window |
| **Output Data** | The page with all the class's information is loaded where there are six tabs: Overview, Students, Instructors, Exams, Candidates, Sections.<br>Upon adding or removing lecturers to a class, a completion message appears and the list of lecturers is updated. |

### *2.3.17 Edit Class*

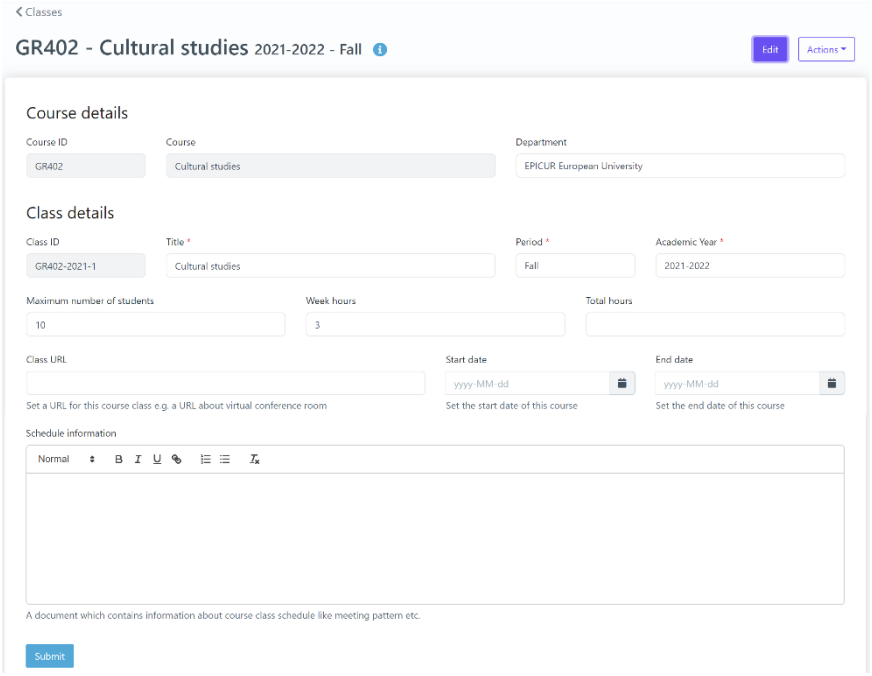


*Figure 21: Edit Class functionality*

*Table 20: Edit Class functionality*

| | |
|---|---|
| **Functionality Name** | Edit Class |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **Class Details:**<br>  • Required: Title<br>  • Optional: Maximum number of students, Week hours, Total hours, Class URL, Start date, End date, Schedule information |
| **Description** | The user can change a class's information by following the steps:<br>1. searches for a specific course on **Classes** page<br>2. clicks on the 3 dots next to the specific class<br>3. selects **Edit** option. There is also an **Edit** button in the class's preview page.<br>4. changes class's information by editing the form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the class's preview page appears. |

### *2.3.18 Search Course Exams*

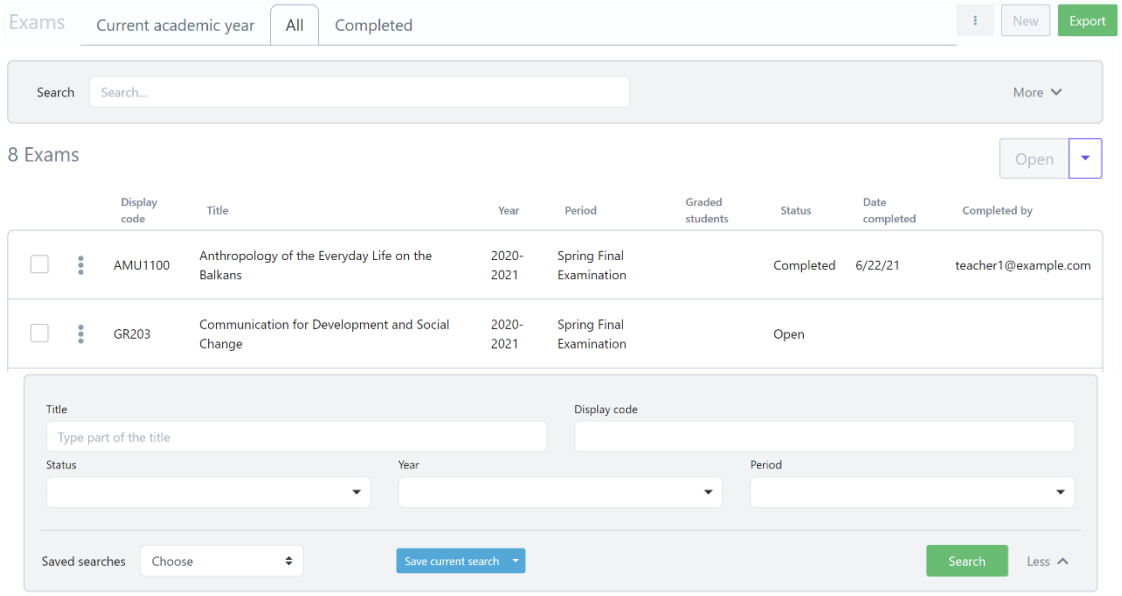


*Figure 22: Search Course Exams functionality: a) List of Course Exams, b) Full search criteria*

*Table 21: Search Course Exams functionality*

| **Functionality Name** | Search Course Exams |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Title, Display Code, Status, Period |
| **Description** | The user can search a group of course exams or a specific course exam by following the steps:<br>1. selects the **Teaching->Exams** option from the VURS's sidebar menu<br>2. selects between current academic year exams (default option), completed exams and all exams from the tabs section<br>3. finds the group of course exams or a specific course exam on the list of course exams by searching/filtering exams (by Title, Display Code, Status, Period) and by sorting them (by Display Code, Title, Year, Period, Graded students, Status, Date completed, Completed by)<br>The user can also perform the actions for exam(s) (by selecting exam(s) and clicking arrow button next to Open): Open, Close, Delete. |
| **Output Data** | The list of the course exams that satisfy the defined requirements appears in the **Exams** page. |

### *2.3.19 Preview Course Exam*

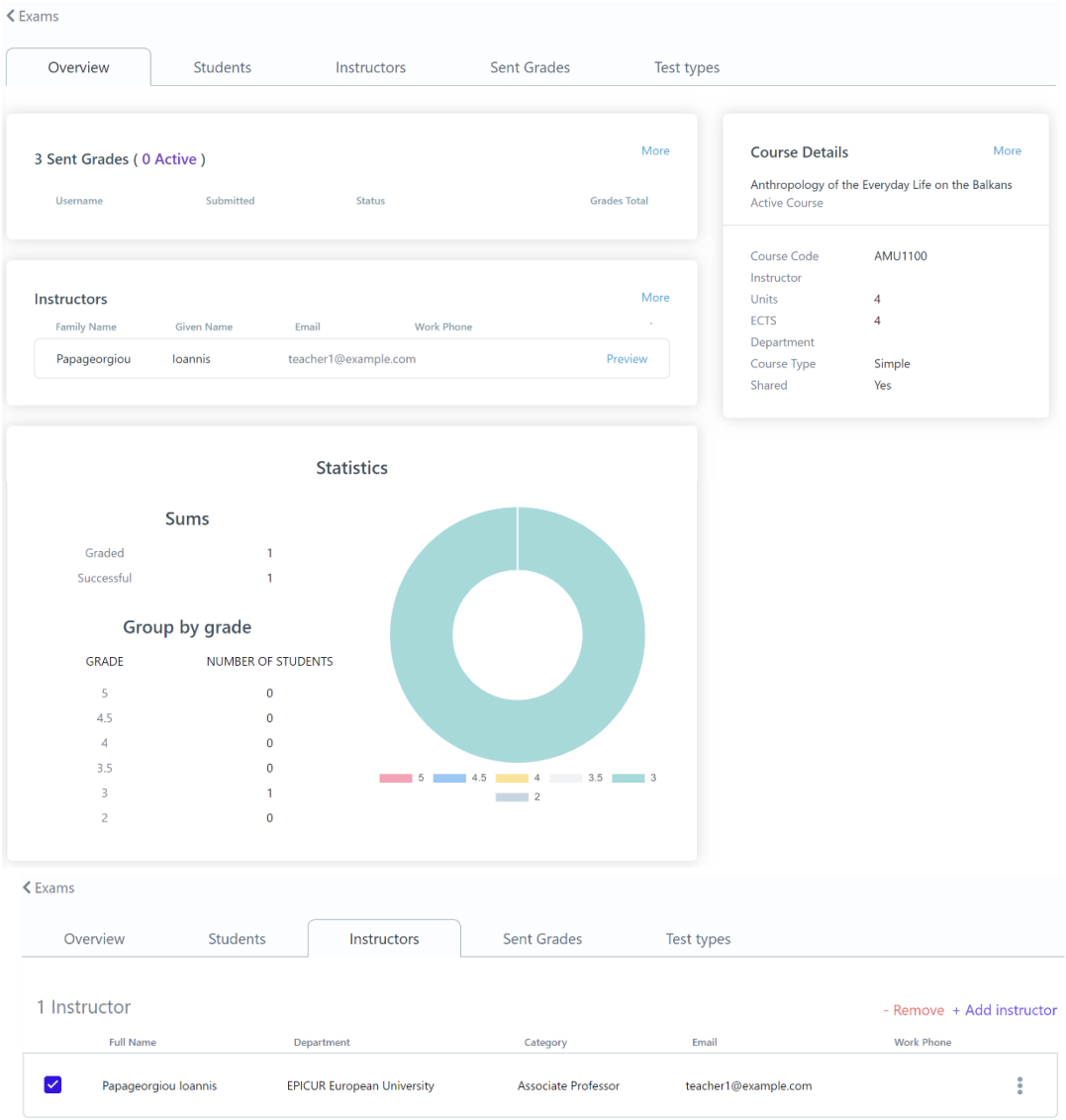


*Figure 23: Preview Course Exam functionality a) Overview tab, b) Instructors tab*

*Table 22: Preview Course Exam functionality*

| **Functionality Name** | Preview Course Exam |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Title, Display Code, Status, Period |
| **Description** | The user can view a course exam's information by following the steps:<br>1. searches for a specific course exam on **Exams** page<br>2. clicks on the 3 dots next to the class<br>3. selects **Preview** option<br>**Add lecturer action**:<br>4. selects **Instructors** tab<br>5. clicks **+ Add instructor** button<br>6. selects lecturer(s) by checking box(es) and clicks **Apply** button<br>**Remove lecturer action**:<br>4. selects **Instructors** tab<br>5. selects lecturer (s) by checking box(es)<br>6. clicks **- Remove** button |

| | |
|---|---|
| | 7. clicks **OK** button on the confirmation popup window |
| **Output Data** | The page with all the course exam's information is loaded where there are five tabs: Overview, Students, Instructors, Sent Grades, Test types.<br>Upon adding or removing lecturers to a course exam, a completion message appears and the list of lecturers is updated |

### *2.3.20 Edit Course Exam*

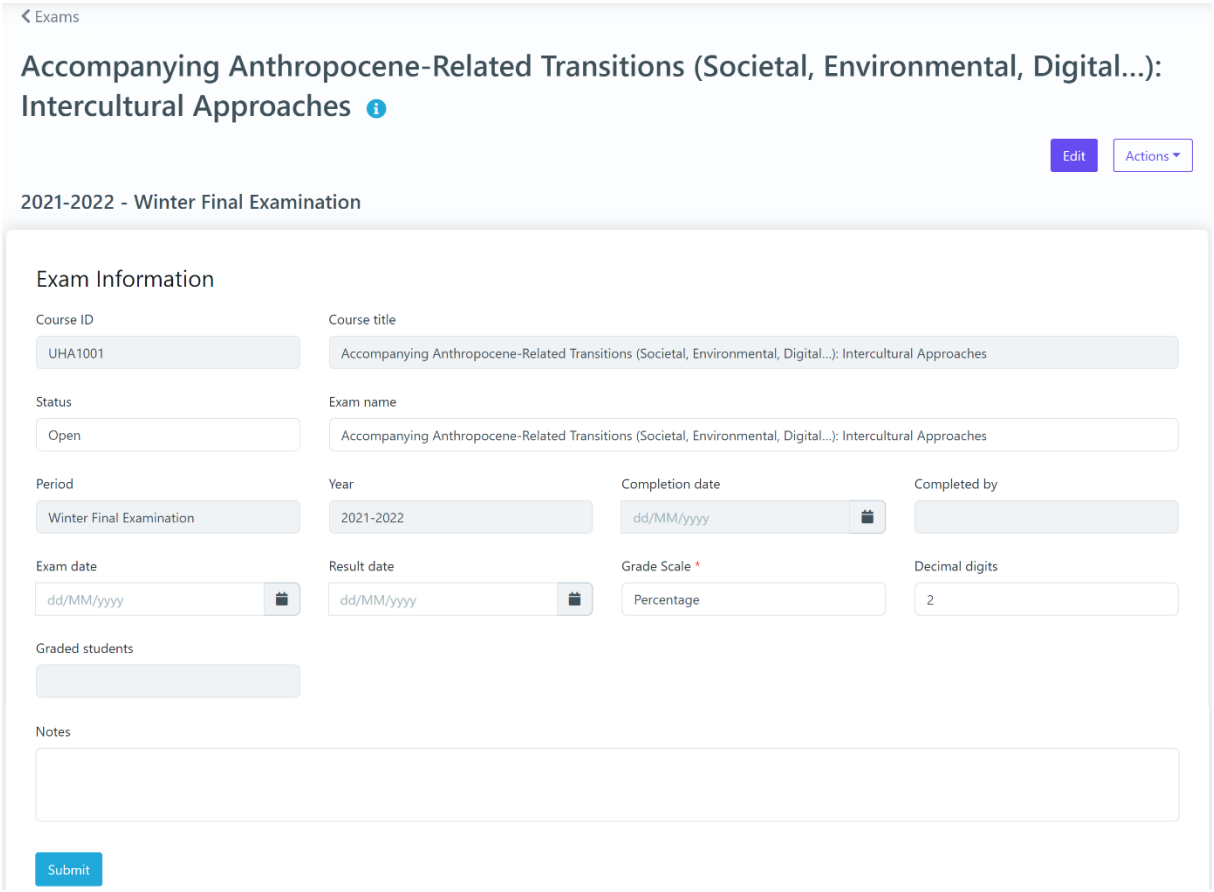


*Figure 24: Edit Course Exam functionality*

*Table 23: Edit Course Exam functionality*

| | |
|---|---|
| **Functionality Name** | Edit Course Exam |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **Exam Information:**<br>  • Optional: Exam name, Exam date, Result date, Decimal digits, Notes |
| **Description** | The user can change a course exam's information by following the steps:<br>1. searches for a specific course on **Exams** page<br>2. clicks on the 3 dots next to the specific course exam<br>3. selects **Edit** option. There is also an **Edit** button in the course exam's preview page.<br>4. changes course exam's information by editing the form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the course exam's preview page appears. |

### *2.3.21 Grade Submission action*

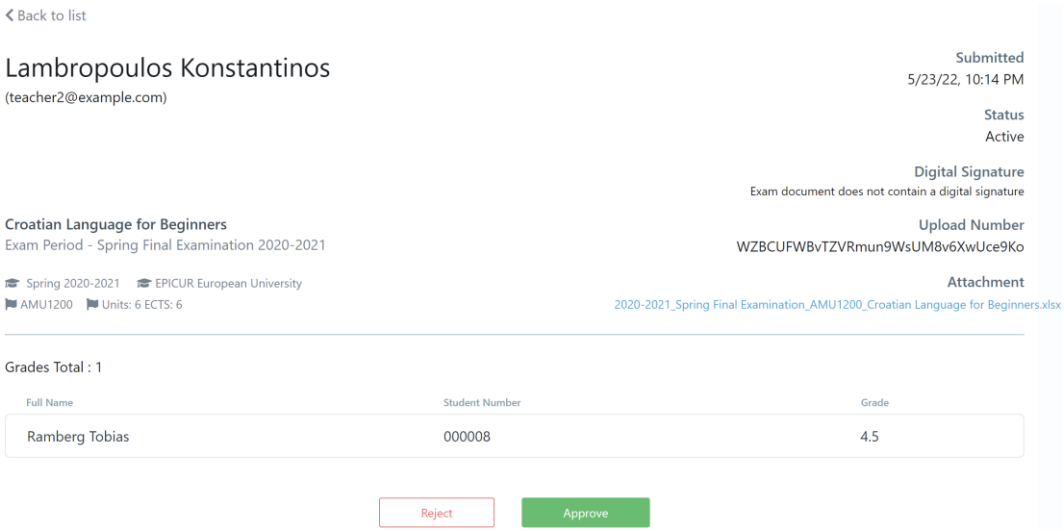


*Figure 25: Grade Submission action functionality*

*Table 24: Grade Submission action functionality*

| **Functionality Name** | Grade Submission action |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | - |
| **Description** | The user can accept/reject a grade submission by following the steps:<br>1. visits the preview page of a specific course exam<br>2. selects **Sent Grades** tab<br>3. clicks on grades submission with an active status by selecting **More** option and **Show** button in Submitted Grades category.<br>4. clicks Approve or Reject button<br>5. clicks **YES** button on confirmation popup window |
| **Output Data** | A completion message shows up. If the user selects to approve the grades submission, the status changes to **Completed**. Otherwise, the status changes to **Failed**. |

### *2.3.22 Search Mobilities*

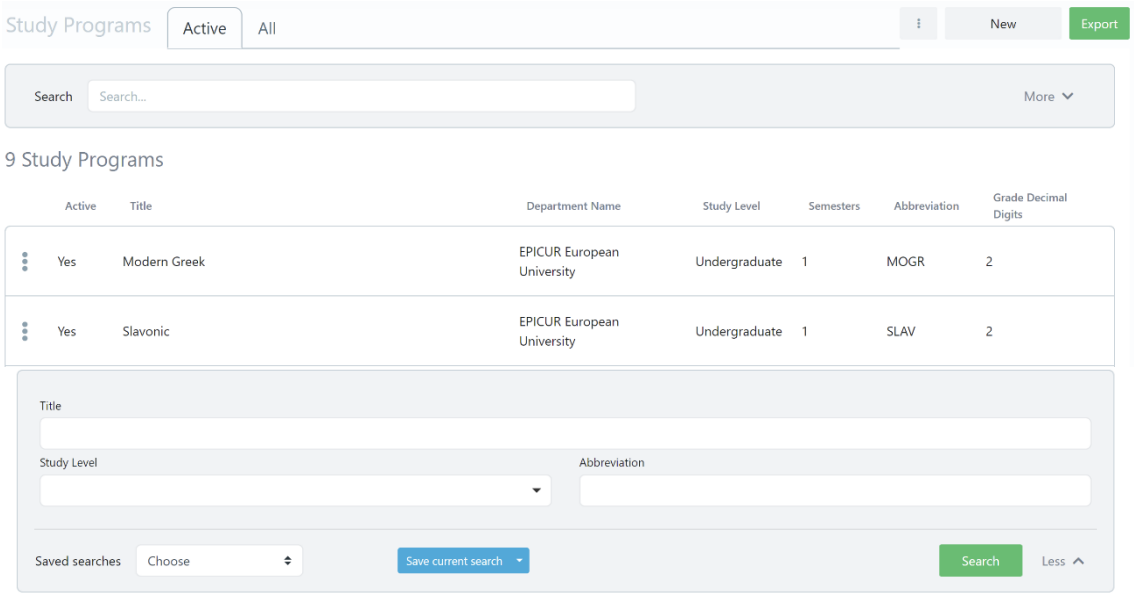


*Figure 26: Search Mobilities functionality: a) List of Mobilities, b) Full search criteria*

*Table 25: Search Mobilities functionality*

| | |
|---|---|
| **Functionality Name** | Search Mobilities |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Title, Study Level, Abbreviation |
| **Description** | The user can search a group of mobilities or a specific mobility by following the steps:<br>1. selects the **Study Programs** option from the VURS's sidebar menu<br>2. selects between active mobilities (default option) and all mobilities from the tabs section<br>3. finds the group of mobilities or a specific mobility on the list of study programs by searching/filtering mobilities (by Title, Study Level, Abbreviation) and by sorting them (by Active, Title Department Name, Study Level, Semesters, Abbreviation, Grade Decimal Digits) |
| **Output Data** | The list of the mobilities that satisfy the defined requirements appears in the **Study Programs** page. |

### *2.3.23 Preview Mobility*

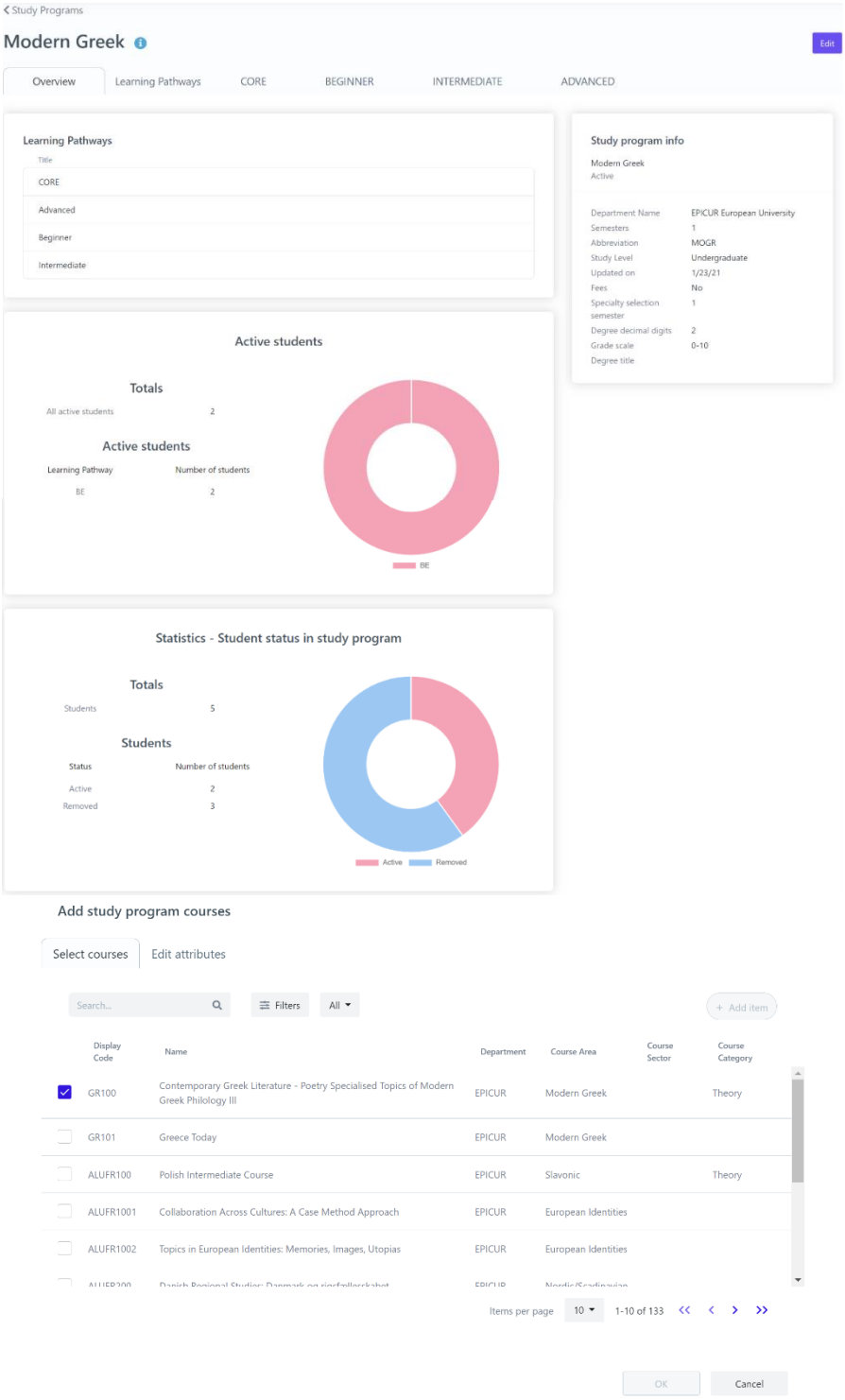


*Figure 27: Preview Mobility functionality: a) Overview tab, b) add course form*

*Table 26: Preview Mobility functionality*

| **Functionality Name** | Preview Mobility |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Title, Study Level, Abbreviation<br>• **Add/Edit learning pathway action:**<br>– Required: Name, Abbreviation<br>– Optional: Write a short description for this learning pathway |

| | |
|---|---|
| | • **Add/Edit course action:**<br>  • Required: Type, Units, Coefficient, ECTS<br>  • Optional: Semester |
| **Description** | The user can view a mobility's information by following the steps:<br>1. searches for a specific mobility on **Study Programs** page<br>2. clicks on the 3 dots next to the mobility<br>3. selects **Preview** option<br>**Add learning pathway action**:<br>4. selects **Learning Pathways** tab<br>5. clicks **+ New** button<br>6. completes new learning pathway form and clicks **Submit** button<br>**Remove learning pathway action**:<br>4. selects **Learning Pathways** tab<br>5. selects learning pathway(s) by checking box(es)<br>6. clicks **– Remove item** button<br>7. clicks **OK** button on the confirmation popup window<br>**Edit learning pathway action**:<br>4. selects **Learning Pathways** tab<br>5. clicks edit icon next to the learning pathway<br>6. changes learning pathway's information by editing learning pathway form and clicks **Submit** button<br>**Add course action**:<br>4. selects a specific learning pathway tab<br>5. clicks arrow button next to Edit<br>6. selects **Add course** option<br>7. selects courses<br>8. selects **Edit attributes** tab<br>9. completes attributes form and clicks **OK** button<br>**Remove course action**:<br>4. selects a specific learning pathway tab<br>5. selects course(s) by checking box(es)<br>6. clicks arrow button next to Edit<br>7. selects **Remove course** option<br>8. clicks **YES** button on the confirmation popup window<br>**Edit course action**:<br>4. selects a specific learning pathway tab<br>5. clicks edit icon next to the learning pathway or selects course by checking box and clicks **Edit** button<br>6. changes course's attributes by editing study program course form and clicks **Submit** button |
| **Output Data** | The page with all the mobility's information is loaded where there are some tabs: Overview, Learning pathways and a tab for each learning pathway.<br>Upon adding, removing or editing learning pathways/courses to a mobility, the list of learning pathways/courses and the tabs are updated. |

### *2.3.24 Create Mobility*

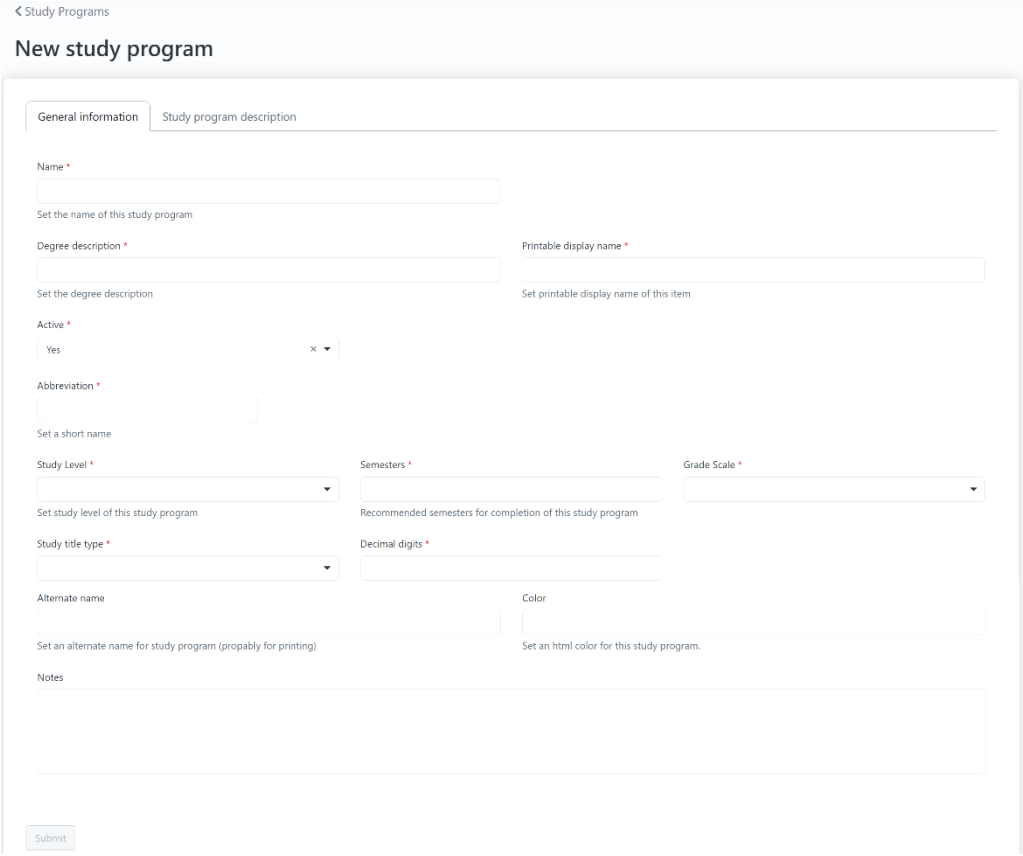


*Figure 28: Create Mobility functionality*

*Table 27: Create Mobility functionality*

| **Functionality Name** | Create Mobility |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **General Information:**<br>  • Required: Name, Degree description, Printable display name, Active, Abbreviation, Study Level, Semesters, Grade Scale, Study title type, Decimal digits<br>  • Optional: Alternate name, Color, Notes<br>• **Study program description:**<br>  • Optional: Official duration, Access requirements, Mode of study, Grading system, Degree requirements, Access to further study, Language of instruction, Additional information, Further information |
| **Description** | The user can create a mobility by following the steps:<br>1. selects the **Study Programs** option from the VURS's sidebar menu<br>2. clicks the button **New**<br>3. completes the new mobility form and submits it<br>To be enabled the submit button, at least the required fields of the form needs to be completed. |
| **Output Data** | A completion popup message is shown after the user's submission and the mobility would be in the study programs list. |

### *2.3.25 Edit Mobility*

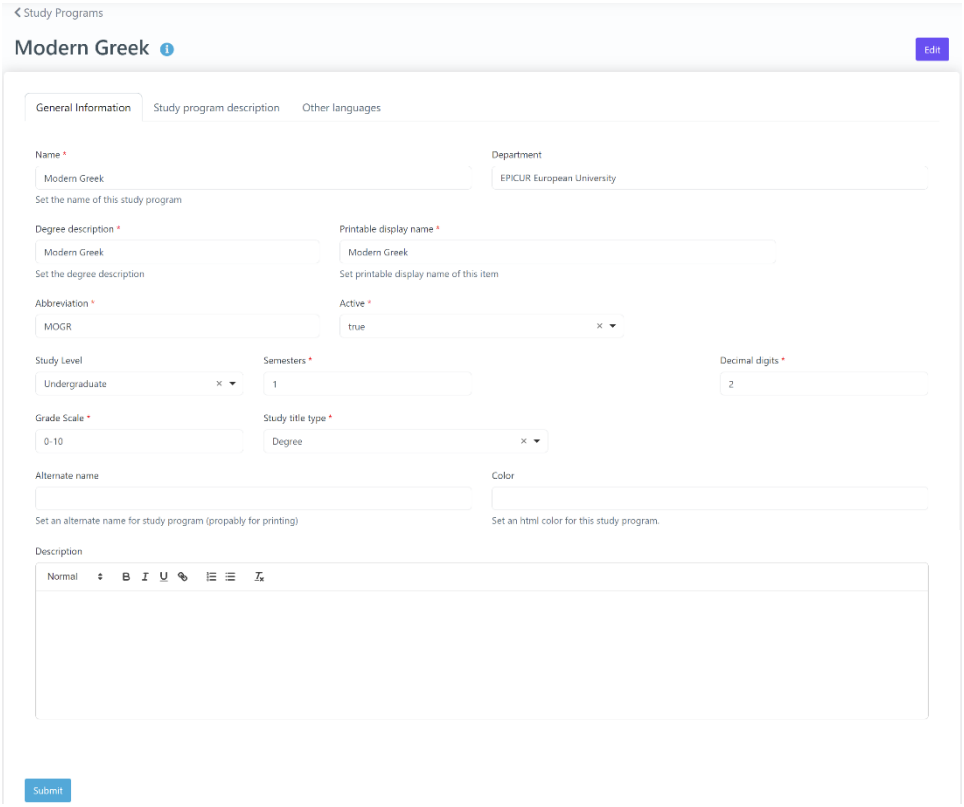


*Figure 29: Edit Mobility functionality*

*Table 28: Edit Mobility functionality*

| **Functionality Name** | Edit Mobility |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **General Information:**<br>  • Required: Name, Degree description, Printable display name, Abbreviation, Active, Semesters, Decimal digits, Study title type<br>  • Optional: Study Level, Alternate name, Color, Description<br>• **Study program description:**<br>  • Optional: Official duration, Access requirements, Mode of study, Grading system, Degree requirements, Access to further study, Language of instruction, Additional information, Further information |
| **Description** | The user can change a mobility's information by following the steps:<br>1. searches for a specific mobility on **Study Programs** page<br>2. clicks on the 3 dots next to the mobility<br>3. selects **Edit** option. There is also an **Edit** button in the mobility's preview page.<br>4. changes mobility's information by editing his/her form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the mobility's preview page appears. |

### *2.3.26 Search Applications*

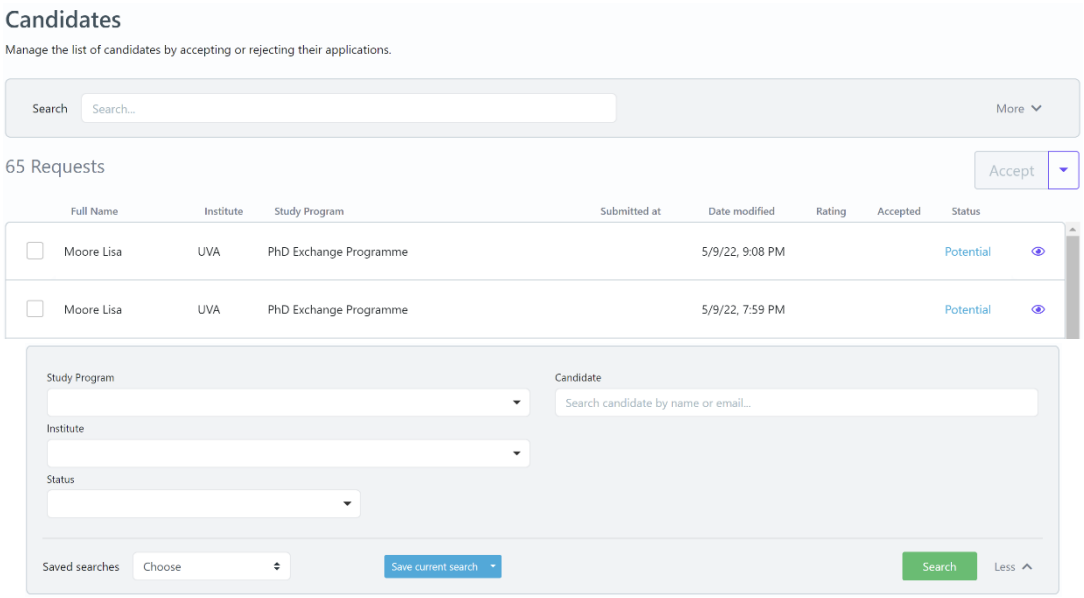


*Figure 30: Search Applications functionality: a) List of Applications, b) Full search criteria*

*Table 29: Search Applications functionality*

| | |
|---|---|
| **Functionality Name** | Search Applications |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Study Program, Candidate (name or email), Institute, Status<br>**Send message action**:<br>• Required: Subject, Write a short message |
| **Description** | The user can search a group of applications or a specific application by following the steps:<br>1. selects the **Candidates** option from the VURS's sidebar menu<br>2. finds the group of applications or a specific application on the list of candidates by searching/filtering applications (by Study Program, Candidate (name or email), Institute, Status) and by sorting them (by Full Name, Institute, Study Program, Submitted at, Date modified, Rating, Accepted, Status)<br>**To communicate with student(s)**:<br>3. selects application(s) by checking box(es)<br>4. clicks arrow button next to Accept<br>5. selects **Compose new message** or **Send a direct message to candidate**<br>6. completes the message form (Subject, Write a short message) and sends it by clicking **Start** button<br>The user can also perform the actions for an application (by clicking arrow button next to Accept): Accept, Reject, Export. |
| **Output Data** | The list of the mobilities that satisfy the defined requirements appears in the **Candidates** page.<br>For "Send message" action, a loading bar appears and after the completion the popup form closes. |

### *2.3.27 Preview Application*

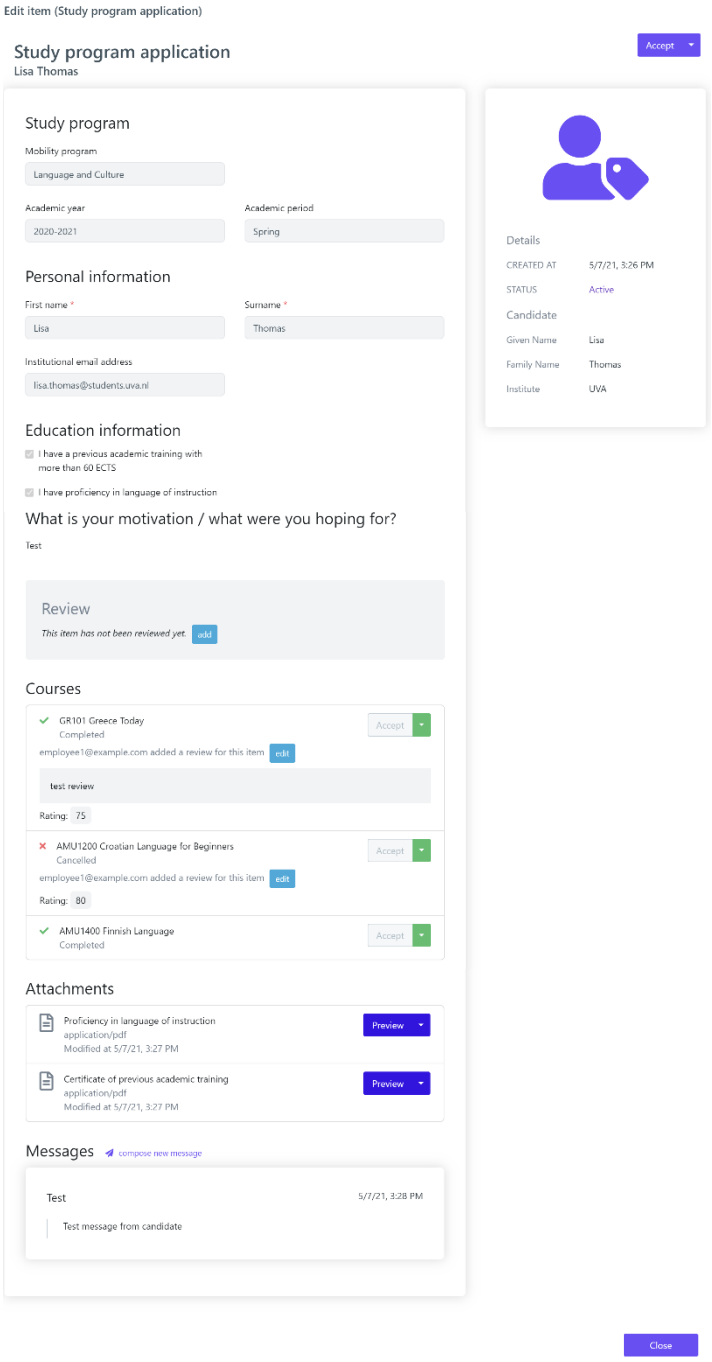


*Figure 31: Preview Application functionality*

*Table 30: Preview Application functionality*

| **Functionality Name** | Preview Application |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Study Program, Candidate (name or email), Institute, Status |
| **Description** | The user can view an application by following the steps:<br>1. searches for a specific application on **Candidates** page<br>2. clicks on the eye button next to the application |
| **Output Data** | The page with all the application's information is loaded, including: Details, Study program, Personal information, Education information, What is your motivation / what were you hoping for?, Courses, Attachments, Messages. |

### 2.3.28 Application Actions

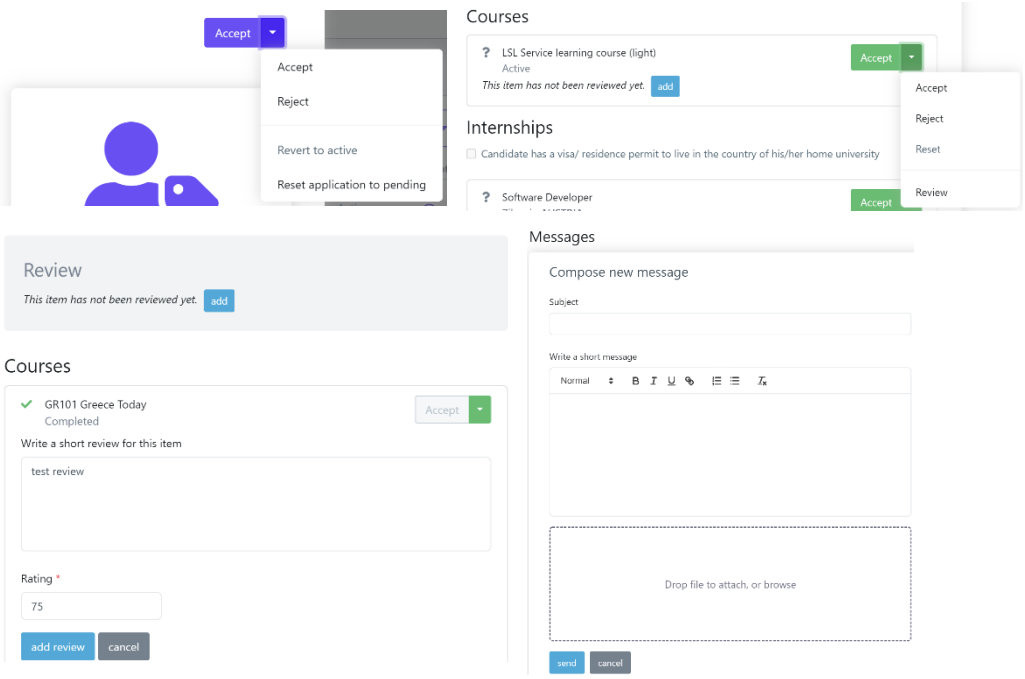


*Figure 32: Application Actions functionality*

*Table 31: Application Actions functionality*

| **Functionality Name** | Application Actions |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Review (Write a short review for this item, Rating (Required)), Message (Subject, Write a short message, file) |
| **Description** | The user can review an application, update its status (accept, reject, revert to active, reset to pending) and communicate with the candidate by following the steps:<br>**To review an application**:<br>1. visits the preview page of a specific application<br>2. clicks **add** button next to the message "This item has not been reviewed yet." on Review section or on each course. For a course, there is the option to review it by selecting **Review** option on the arrow button next to Accept button. There is also, the option to edit an existing review<br>3. completes the review form (Write a short review for this item, Rating) and submits it<br>**To update status**:<br>1. visits the preview page of a specific application<br>2. for a course, next to it, selects Accept, Reject or Reset option. For the whole application, next to "Study program application", selects Accept, Reject, Revert to active or Reset application to pending<br>**To communicate with the candidate**:<br>1. visits the preview page of a specific application<br>2. clicks compose new message on Message section<br>3. completes the message form (Subject, Write a short message, attach file) and sends it |
| **Output Data** | For "Review" and "Send message" actions, the result is shown in the |

| | |
|---|---|
| | application. For “Change status” action, a confirmation box appears first to finalize this action. |

### 2.3.29 Search Student Requests

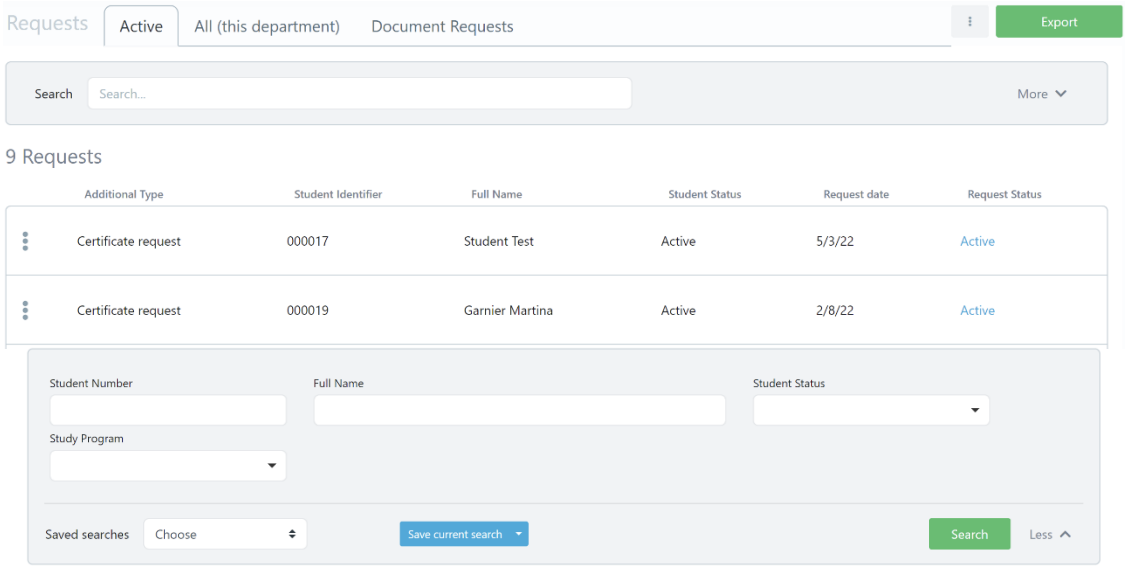


*Figure 33: Search Student Requests functionality: a) List of Student Requests, b) Full search criteria*

*Table 32: Search Student Requests functionality*

| **Functionality Name** | Search Student Requests |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Student Number, Full Name, Student Status, Study Program |
| **Description** | The user can search a group of student requests or a specific student request by following the steps:<br>1. selects the **Requests** option from the VURS’s sidebar menu<br>2. selects between active requests (default option), all (this department) requests and document requests from the tabs section<br>3. finds the group of student requests or a specific student request on the list of requests by searching/filtering student requests (by Student Number, Full Name, Student Status, Study Program) and by sorting them (by Additional Type, Student Identifier, Full Name, Student Status, Request date, Request Status) |
| **Output Data** | The list of the student requests that satisfy the defined requirements appears in the **Requests** page. |

### 2.3.30 Preview Student Request

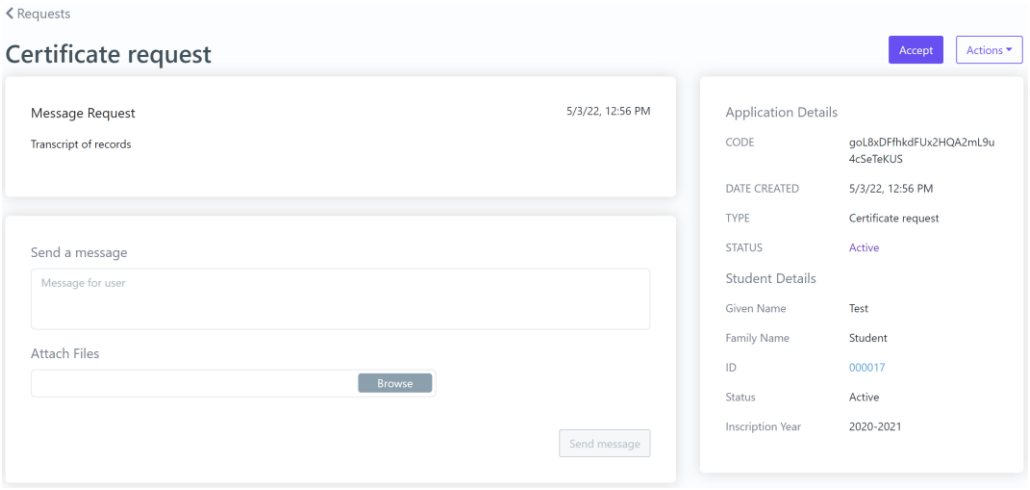


*Figure 34: Preview Student Request functionality*

*Table 33: Preview Student Request functionality*

| **Functionality Name** | Preview Student Requests |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Student Number, Full Name, Student Status, Study Program<br>**Send message action**:<br>• Required: Message for user<br>• Optional: Attach files |
| **Description** | The user can view an application by following the steps:<br>1. searches for a specific student request on **Requests** page<br>2. clicks on the 3 dots next to the request<br>3. selects **Preview** option<br>**To communicate with student**:<br>4. completes the message form on Send a message section<br>5. clicks **Send message** button<br><br>The user can also perform the actions (by clicking **Actions** button): Accept, Reject, Release. |
| **Output Data** | The page with all the student request's information is loaded, including: all the available actions.<br>For "Send message" action, the result is shown in the Response section. The other actions change requests' status. |

### *2.3.31 Search Student Registrations*

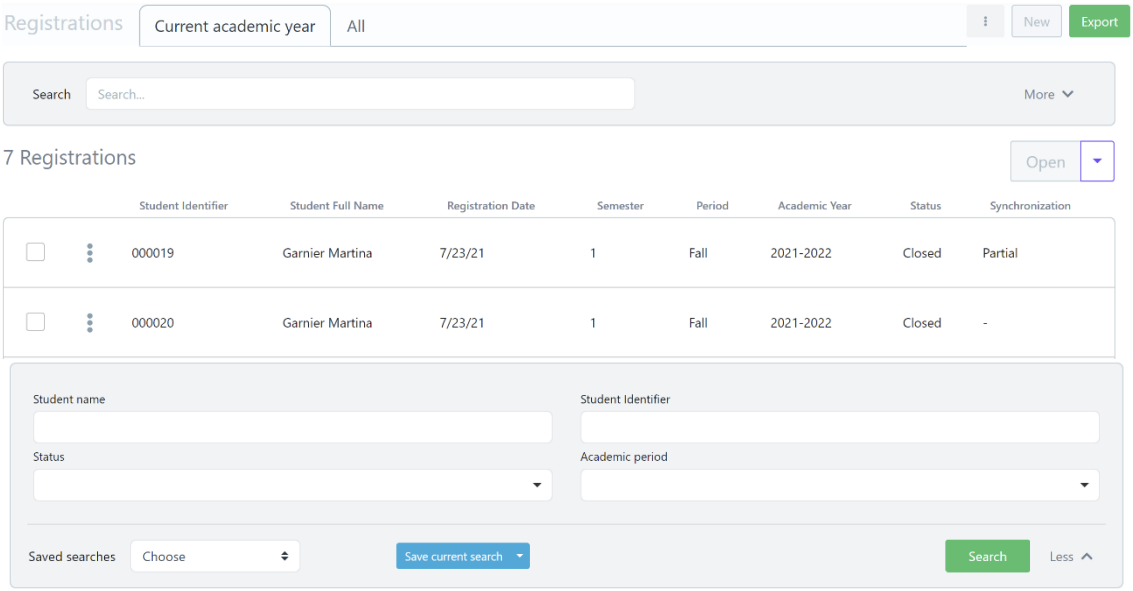


*Figure 35: Search Student Registrations functionality: a) List of Student Registrations, b) Full search criteria*

*Table 34: Search Student Registrations functionality*

| **Functionality Name** | Search Student Registrations |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Student Name, Student Identifier, Status, Academic period |
| **Description** | The user can search a group of student registrations or a specific student registration by following the steps:<br>1. selects the **Registrations** option from the VURS's sidebar menu<br>2. selects between current academic year registrations (default option) and all registrations from the tabs section<br>3. finds the group of student registrations or a specific student registration on the list of registrations by searching/filtering student registrations (by Student Name, Student Identifier, Status, Academic period) and by sorting them (by Student Identifier, Student Full Name, Registration Date, Semester, Period, Academic Year, Status, Synchronization)<br><br>The user can perform the actions for a student registration (by clicking arrow button next to Open): Open, Close, Synchronize data to VCLP. |
| **Output Data** | The list of the student registrations that satisfy the defined requirements appears in the **Registrations** page. |

### *2.3.32 Search Internships*

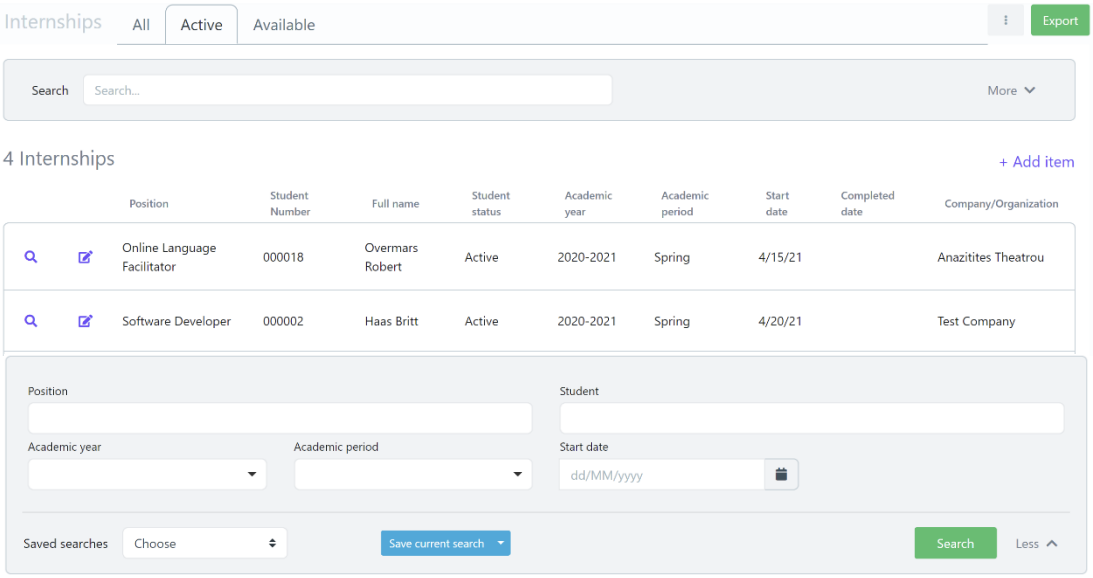


*Figure 36: Search Internships functionality: a) List of Internships, b) Full search criteria*

*Table 35: Search Internships functionality*

| **Functionality Name** | Search Internships |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Position, Student, Academic year, Academic period, Start date |
| **Description** | The user can search a group of internships or a specific internship by following the steps:<br>1. selects the **More->Internships** option from the VURS's sidebar menu<br>2. selects between all internships, active internships (default option) and available internships from the tabs section<br>3. finds the group of internships or a specific internship on the list of internships by searching/filtering them (by Position, Student, Academic year, Academic period, Start date) and by sorting them (by Position, Student Number, Full name, Student Status, Academic year, Academic period, Start date, Completed dates) |
| **Output Data** | The list of the internships that satisfy the defined requirements appears in the **Internships** page. |

### *2.3.33 Preview Internships*

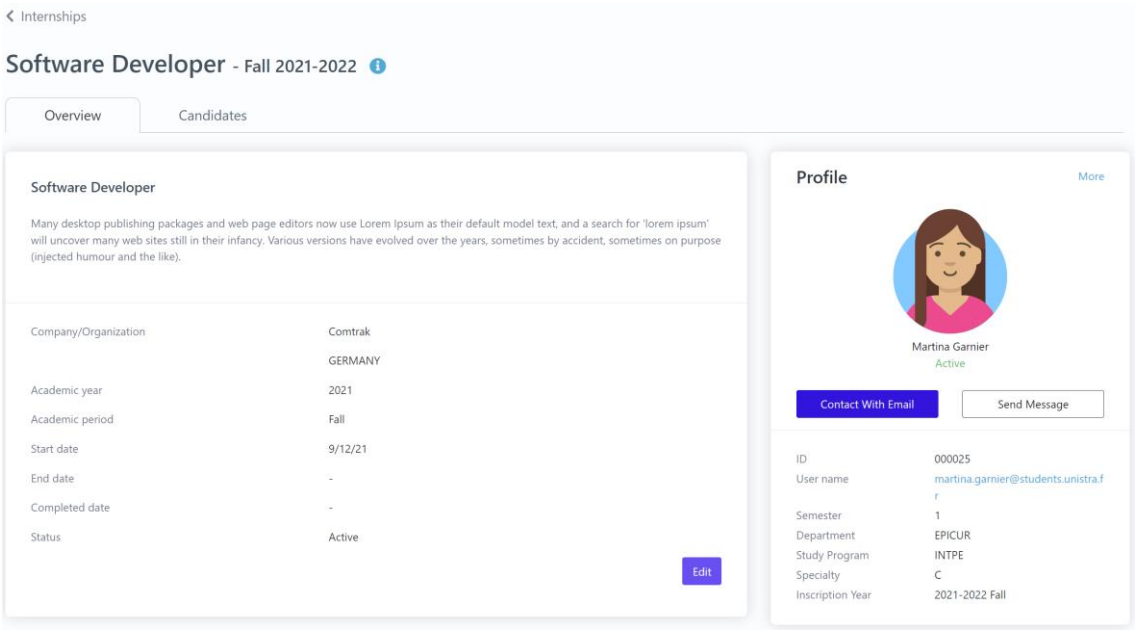


*Figure 37: Preview Internships functionality*

*Table 36: Preview Internships functionality*

| **Functionality Name** | Preview Internships |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Position, Student, Academic year, Academic period, Start date |
| **Description** | The user can view an internship's information by following the steps:<br>1. searches for a specific internship on **Internships** page<br>2. clicks on lens icon next to the internship |
| **Output Data** | The page with all the internship's information is loaded where there are some tabs: Overview, Candidates. |

### *2.3.34 Create Internship*

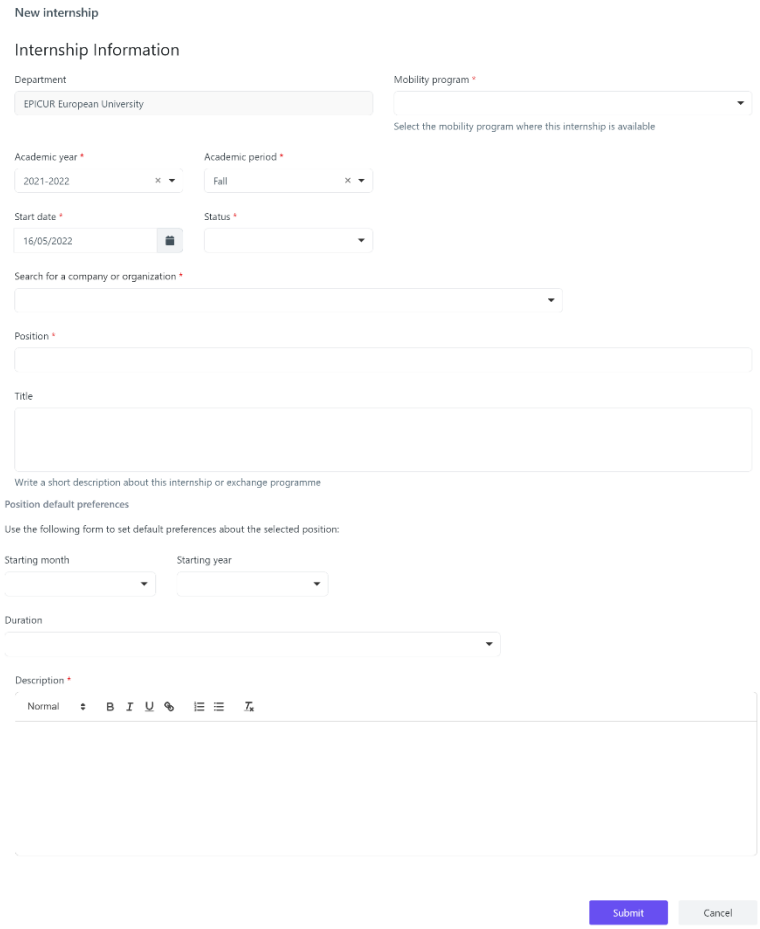


*Figure 38: Create Internship functionality*

*Table 37: Create Internship functionality*

| **Functionality Name** | Create Internship |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **Internship Information**:<br>– Required: Mobility program, Academic year, Academic period, Start date, Status, Search for a company or organization, Position, Description<br>– Optional: Title, Starting month, Starting year, Duration |
| **Description** | The user can create an internship by following the steps:<br>1. selects the **More->Internship** option from the VURS's sidebar menu<br>2. clicks the button **+ Add item**<br>3. completes the new internship form and submits it<br>To be enabled the submit button, at least the required fields of the form needs to be completed. |
| **Output Data** | A completion popup message is shown after the user's submission and the internship would be in the study programs list. |

### *2.3.35 Edit Internship*

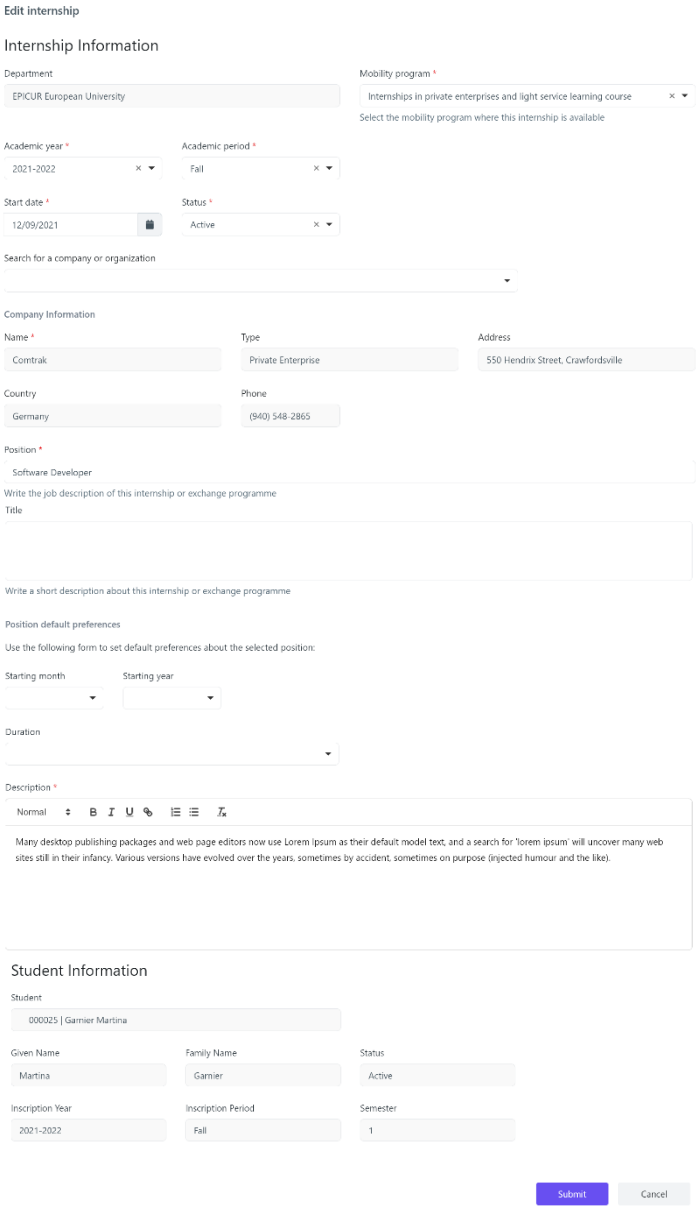


*Figure 39: Edit Internship functionality*

*Table 38: Edit Internship functionality*

| | |
|---|---|
| **Functionality Name** | Edit Internship |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | • **Internship Information**:<br>– Required: Mobility program, Academic year, Academic period, Start date, Status, Position, Description<br>– Optional: Search for a company or organization, Title, Starting month, Starting year, Duration |
| **Description** | The user can change an internship's information by following the steps:<br>1. searches for a specific internship on **Internships** page<br>2. clicks on the edit icon next to the position of the internship<br>3. changes internship's information by editing the form and submits it |
| **Output Data** | After the user's submission the internships information changes. |

### 2.3.36 Search Companies/Organizations

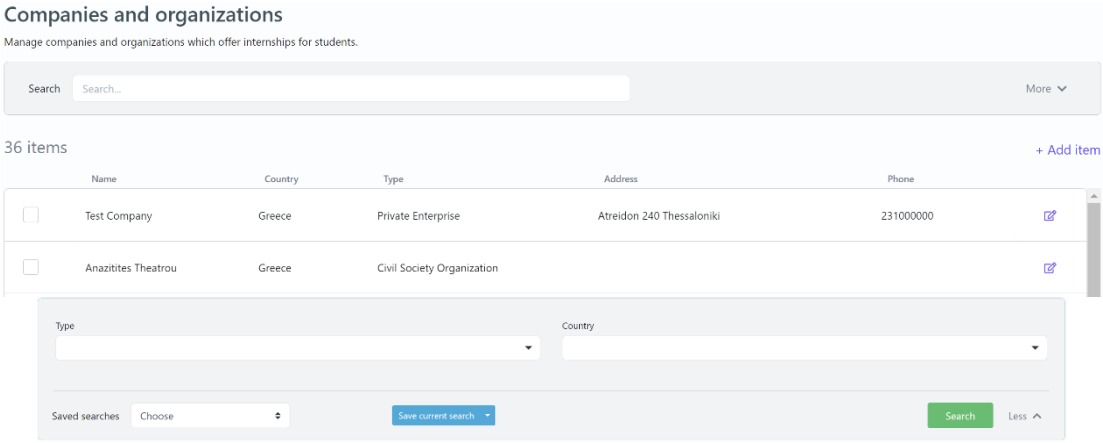


*Figure 40: Search Companies/Organizations functionality: a) List of Companies/Organizations, b) Full search criteria*

*Table 39: Search Companies/Organizations functionality*

| | |
|---|---|
| **Functionality Name** | Search Companies/Organizations |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Type, Country |
| **Description** | The user can search a group of companies/organizations or a specific company/organization by following the steps:<br>1. selects the **More->Settings** option from the VURS's sidebar menu<br>2. searches for **Companies and organizations** and clicks **Expand** button<br>3. finds the group of companies/organizations or a specific company/organization on the list of companies and organizations by searching/filtering them (by Type, Country) and by sorting them (by Name, Country, Type, Address, Phone)<br>**Remove item action**:<br>4. selects company(ies)/organization(s) by checking box(es)<br>5. clicks – **Remove item** button<br>6. clicks **OK** button on the confirmation popup window |
| **Output Data** | The list of the companies/organizations that satisfy the defined requirements appears in the **Companies and organizations** page.<br>Upon removing companies/organizations, the list of companies/organizations is updated. |

### 2.3.37 Add Company/Organization

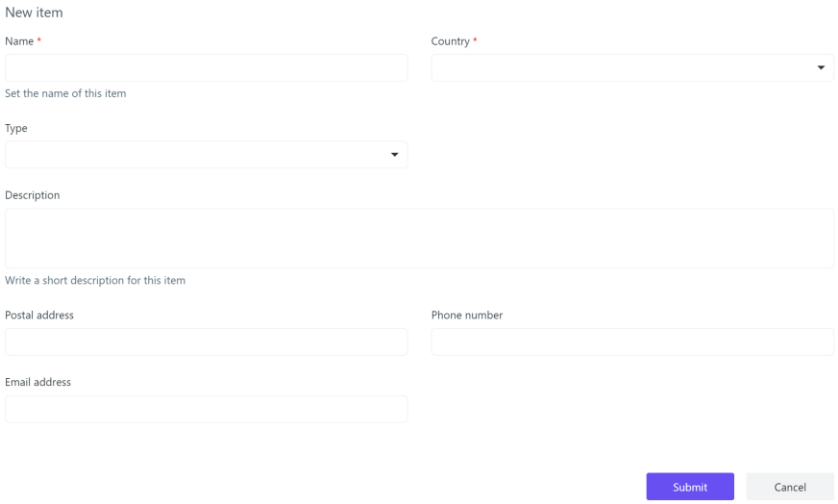


*Figure 41: Add Company/Organization functionality*

*Table 40: Add Company/Organization functionality*

| | |
|---|---|
| **Functionality Name** | Add Company/Organization |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | – Required: Name, Country<br>– Optional: Type, Description, Postal address, Phone number, Email address |
| **Description** | The user can add a company/organization by following the steps:<br>1. selects the **More->Settings** option from the VURS's sidebar menu<br>2. searches for **Companies and organizations** and clicks **Expand** button<br>3. clicks the button **+ Add item**<br>4. completes the new item form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the company/organization would be in the companies and organizations list. |

### *2.3.38 Edit Company/Organization*

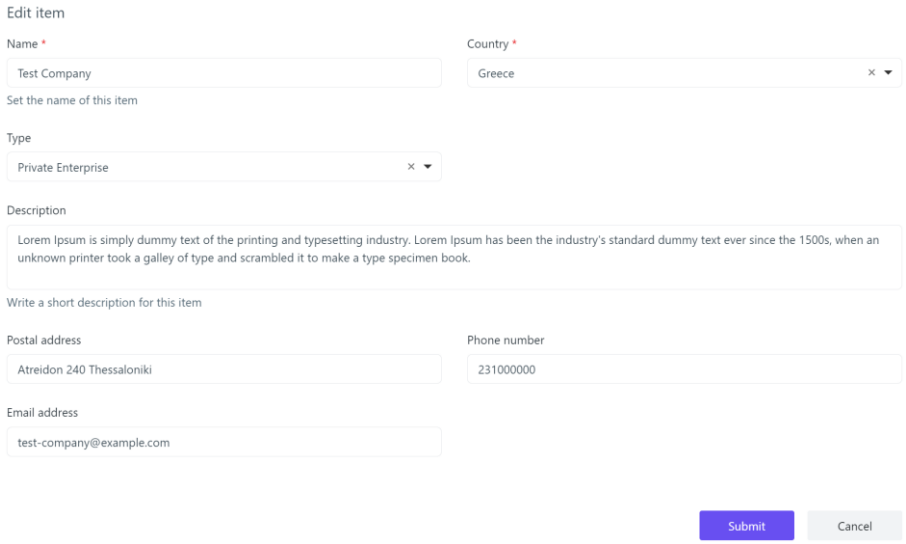


*Figure 42: Edit Company/Organization functionality*

*Table 41: Edit Company/Organization functionality*

| | |
|---|---|
| **Functionality Name** | Edit Company/Organization |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | – Required: Name, Country<br>– Optional: Type, Description, Postal address, Phone number, Email address |
| **Description** | The user could change the information of a company/organization by following the steps:<br>1. searches for a specific company/organization on **Companies and organizations** page<br>2. clicks on the edit icon next to the company/organization<br>3. changes company's/organization's information by editing the form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the **Companies and organizations** page appears. |

### *2.3.39 Search Company Types*

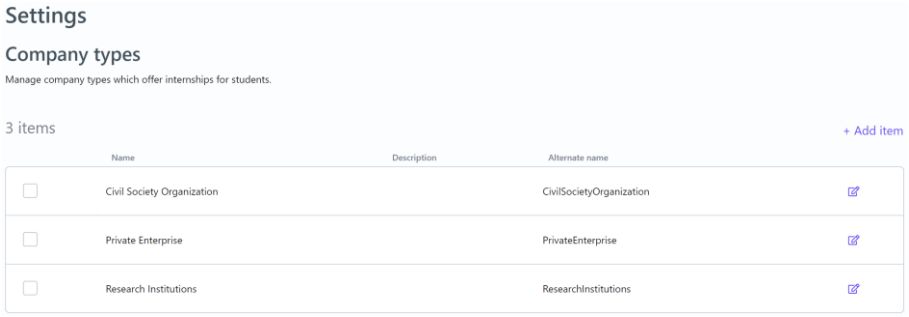


*Figure 43: Search Company Types functionality*

*Table 42: Search Company Types functionality*

| | |
|---|---|
| **Functionality Name** | Search Company Types |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | - |
| **Description** | The user can search a group of company types or a specific company type by following the steps:<br>1. selects the **More->Settings** option from the VURS's sidebar menu<br>2. searches for **Company types** and clicks **Expand** button<br>3. finds the group of company types or a specific company type on the list of company types by sorting them (by Name, Description, Alternate name)<br>**Remove item action**:<br>4. selects company type(s) by checking box(es)<br>5. clicks – **Remove item** button<br>6. clicks **OK** button on the confirmation popup window |
| **Output Data** | The sorted list of the company types appears in the **Company types** page.<br>Upon removing company types, the list of company types is updated. |

### *2.3.40 Add Company Type*

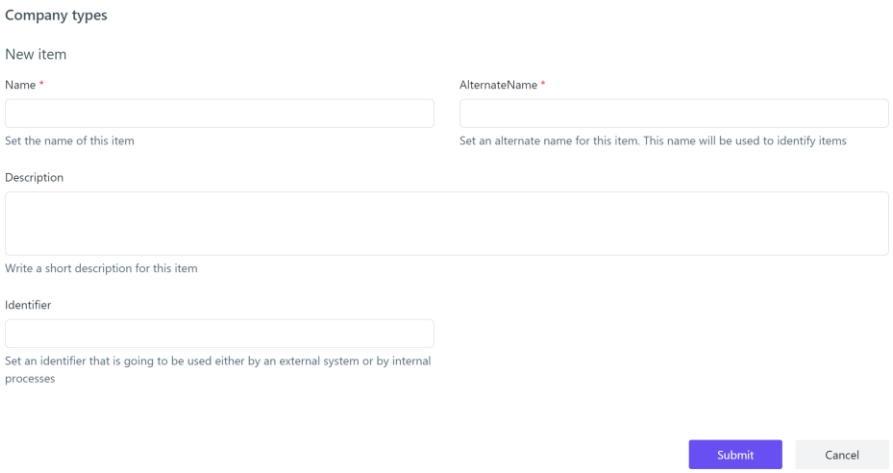


*Figure 44: Add Company Type functionality*

*Table 43: Add Company Type functionality*

| **Functionality Name** | Add Company Type |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | – Required: Name, Alternate Name<br>– Optional: Description, Identifier |
| **Description** | The user can add a company type by following the steps:<br>1. selects the **More->Settings** option from the VURS's sidebar menu<br>2. searches for **Company types** and clicks **Expand** button<br>3. clicks the button **+ Add item**<br>4. completes the new item form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the company type would be in the company types list. |

### *2.3.41 Edit Company Type*

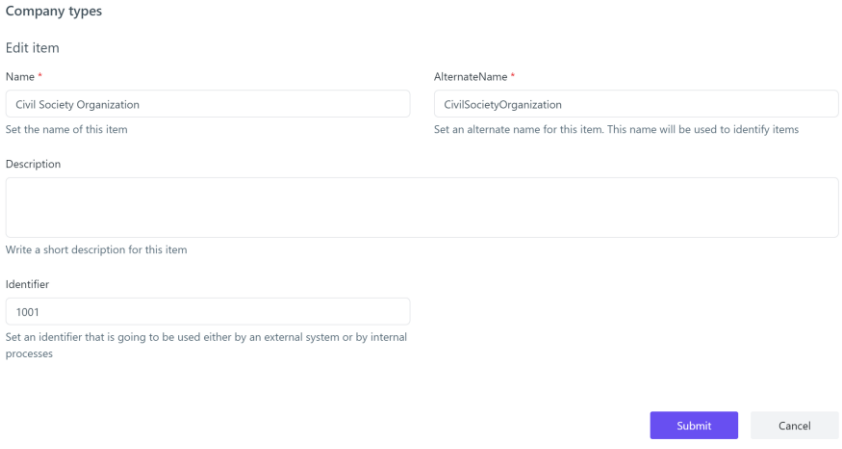


*Figure 45: Edit Company Type functionality*

*Table 44: Edit Company Type functionality*

| **Functionality Name** | Edit Company Type |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | – Required: Name, Alternate Name<br>– Optional: Description, Identifier |

| | |
|---|---|
| **Description** | The user can change the information of a company type by following the steps:<br>1. searches for a specific company type on **Company types** page<br>2. clicks on the edit icon next to the company type<br>3. changes company type's information by editing the form and submits it |
| **Output Data** | A completion popup message is shown after the user's submission and the **Company types** page appears. |

### 2.3.42 Search Archived Documents

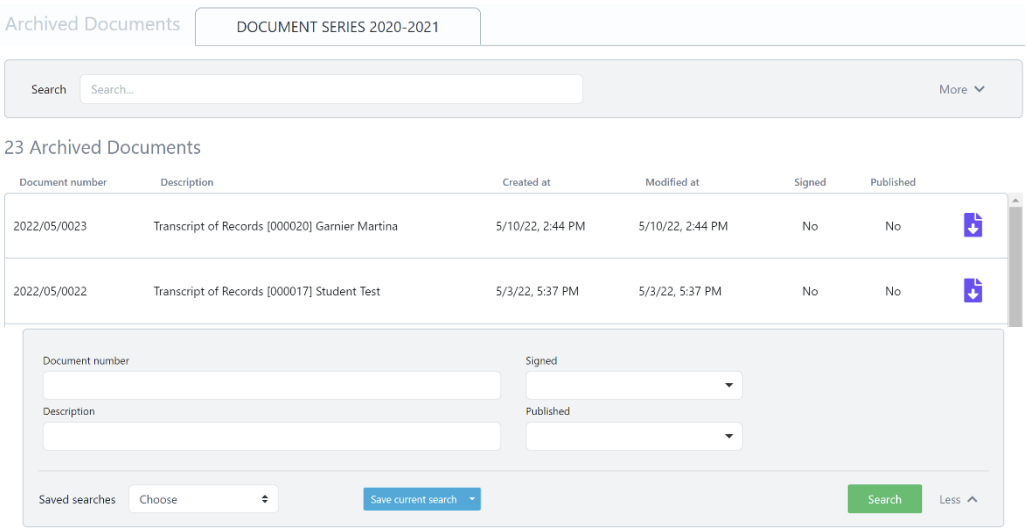


*Figure 46: Search Archived Documents functionality: a) List of Archived Documents, b) Full search criteria*

*Table 45: Search Archived Documents functionality*

| | |
|---|---|
| **Functionality Name** | Search Archived Documents |
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Optional: Document number, Signed, Description, Published |
| **Description** | The user can search a group of archived documents or a specific archived document by following the steps:<br>1. selects the **More->Archived Documents** option from the VURS's sidebar menu<br>2. finds the group of archived documents or a specific archived document on the list of archived documents by searching/filtering them (by Document number, Signed, Description, Published) and by sorting them (by Document number, Description, Created at, Modified at, Signed, Published) |
| **Output Data** | The list of the archived documents that satisfy the defined requirements appears in the **Archived Documents** page. |

### 2.3.43 Search Lists/Enumerations

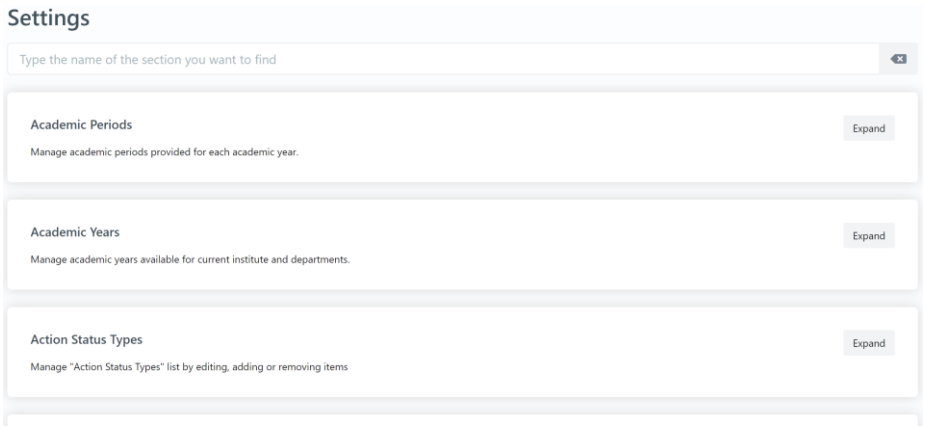


*Figure 47: Search Lists/Enumerations functionality*

*Table 46: Search Lists/Enumerations functionality*

| **Functionality Name** | Search Lists/Enumerations |
|---|---|
| **Actors** | Administrators, Registrar Users |
| **Input Data** | Depends on the list/enumeration |
| **Description** | The user can search lists and enumerations like academic years, academic period, course categories, course types etc. by following the steps:<br>1. selects the **More->Settings** option from the VURS's sidebar menu<br>2. searches for a list/enumeration and clicks **Expand** button<br>3. finds items on the list where the user can sort them, add a new item and edit an existing one |
| **Output Data** | For sorting items action, the sorted list appears in the page. For adding and editing an item, a completion popup message is shown after the user's submission. |

## 2.4 Students

### *2.4.1 Preview Main Information*

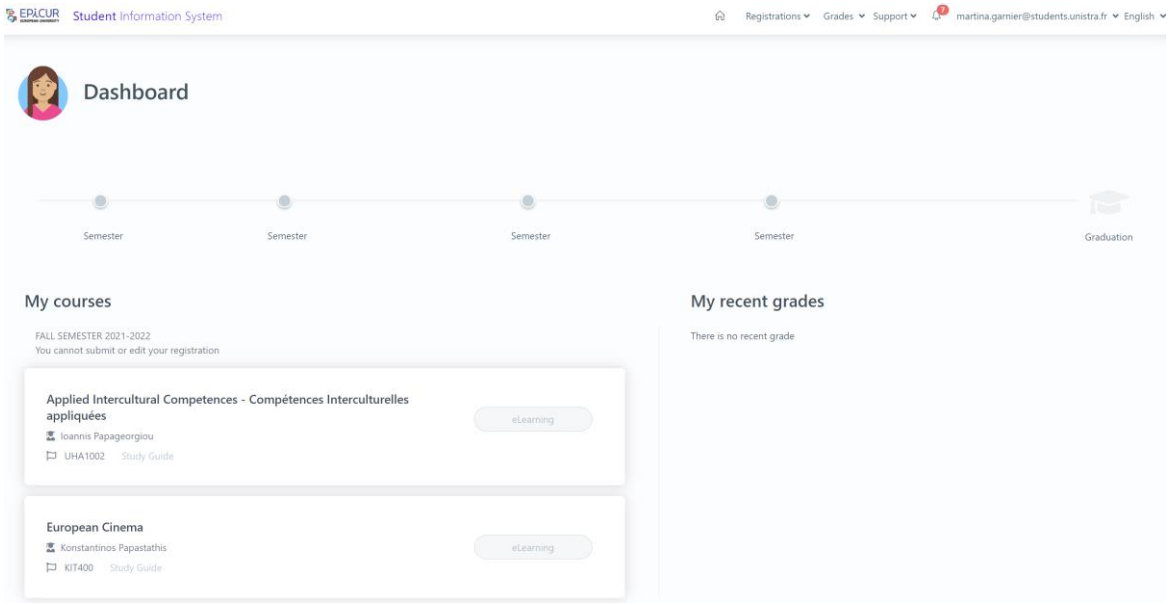


*Figure 48: Preview Main Information functionality*

*Table 47: Preview Main Information functionality*

| | |
|---|---|
| **Functionality Name** | Preview Main Information |
| **Actors** | Students |
| **Input Data** | - |
| **Description** | The user can view his/her main personal data by selecting the home icon from the VURS's menu bar |
| **Output Data** | The page with the main user's information is loaded which are: study profile, registered courses, recent grades. |

### *2.4.2 Check Grades*

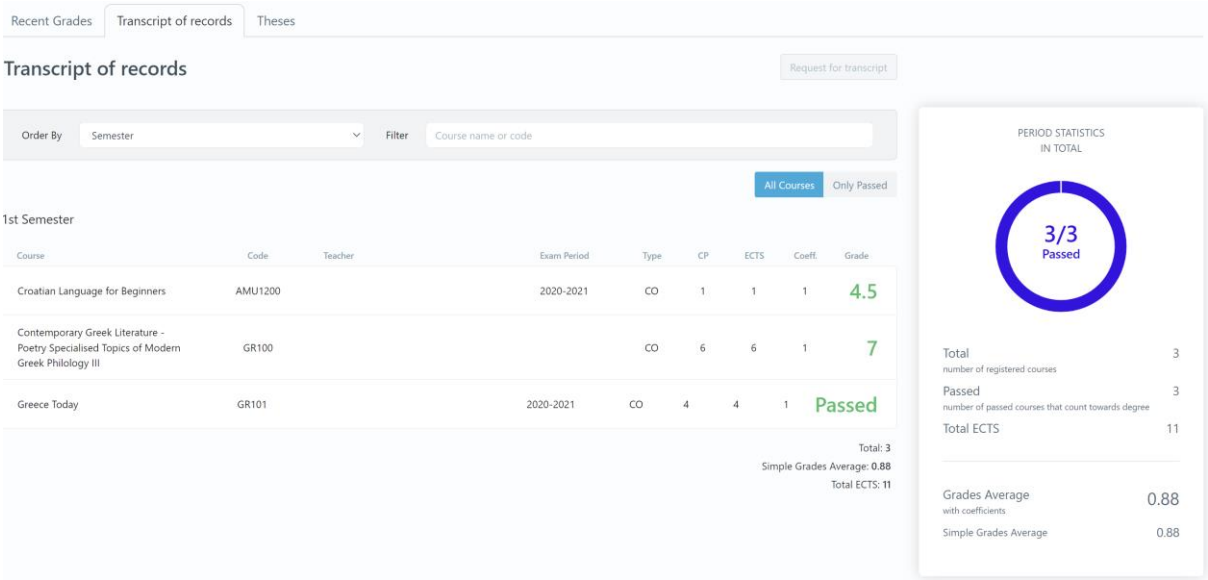


*Figure 49: Check Grades functionality: All Grades*

*Table 48: Check Grades functionality*

| | |
|---|---|
| **Functionality Name** | Check Grades |
| **Actors** | Students |
| **Input Data** | Optional: Name, Code |
| **Description** | The user can check his/her grades by following the steps:<br>**For Recent Grades**:<br>1. selects the **More->Recent Grades** option from the VURS's menu bar<br>There is the option to check for each course the statistics of grades regarding the number of students by clicking **Statistics** button on the specific course section.<br>**For All Grades**:<br>1. selects the **More->All Grades** option from the VURS's menu bar<br>2. selects between all courses (default option) and only passed courses<br>3. checks courses grades by searching/filtering them (by name or code) and by sorting them (by Semester, Type)<br>**For Theses' Grades**:<br>1. selects the **More->Theses** option from the VURS's menu bar |

| | |
|---|---|
| | The user can also switch between categories by selecting one of the following tabs: Recent Grades, Transcripts of records (for all grades), Theses. |
| **Output Data** | The page with the grades is loaded with some statistics. If the user selects statistics within a specific course, a popup window with relevant information appears. |

### *2.4.3 View Requests*

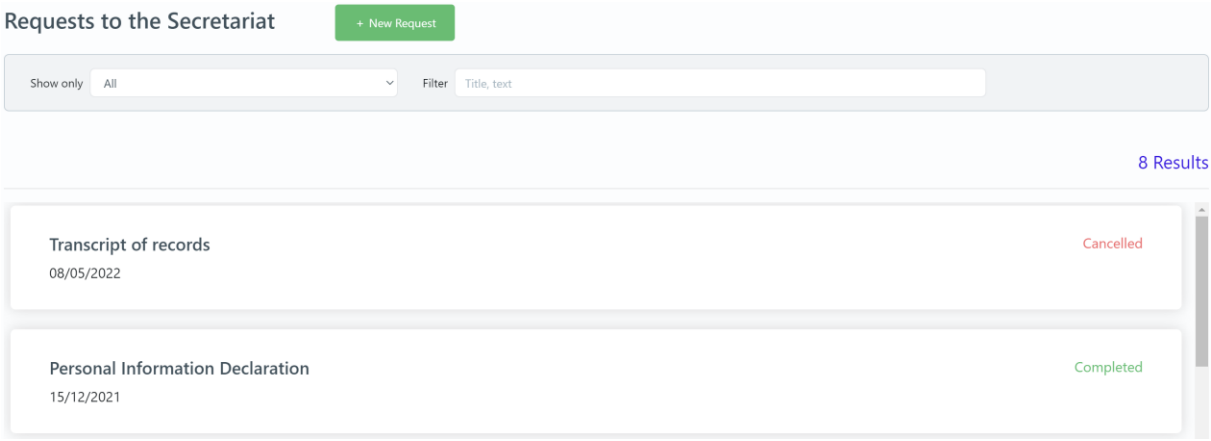


*Figure 50: View Requests functionality*

*Table 49: View Requests functionality*

| | |
|---|---|
| **Functionality Name** | View Requests |
| **Actors** | Students |
| **Input Data** | Optional: Title, Text |
| **Description** | The user can view his/her requests by following the steps:<br>1. selects the **Support->Requests** option from the VURS's menu bar<br>2. selects between all requests (default option), pending requests, approved requests and failed requests<br>3. finds a group of requests or a specific request on the list of requests to the secretariat by searching/filtering them (by title, text)<br>When there are files attached to a request, the user is able to download them by clicking the **Download documents** button. |
| **Output Data** | The list of requests that satisfy the defined requirements appears on the **Requests to the Secretariat** page where the user can see the status of each request and the secretariat's response. By clicking the **Download documents** button in a request, the attached files are downloaded to the user's computer. |

Document Unique Code

EPICUR EUROPEAN UNIVERSITY

# EPICUR European University

## Transcript of Records

Academic Period: 2021-2022 Fall

DocNo: 2021/12/0017

*Personal Information*

| | | | |
|---|---|---|---|
| Student last name: | **Ramberg** | First name: | **Tobias** |
| Date of birth: | **2000-10-20** | Gender: | **Male** |
| Place of birth: | **Munich** | Matriculation number: | **20180032025551** |
| Country of birth: | **Germany** | | |

| | |
|---|---|
| Name of sending institution: | **Karlsruhe Institute of Technology** |
| Faculty: | **Physics** |
| Address: | **Karlsruhe Institute of Technology Hermann-von-Helmholtz-Platz 1 76344** |
| EPICUR Secretariat/ Coordinator: | **Lukas Schneider** |

| Receiving Institution | Start mobility date | End mobility date | Form of study | Title of the course unit at the Receiving Institution | Local grade | Number of ECTS credits |
|---|---|---|---|---|---|---|
| AUTH | 2021-02-02 | 2021-04-30 | Theory | Contemporary Greek Literature - Poetry Specialised Topics of Modern Greek Philology III | 7 | 6.0 |
| AMU | 2021-01-18 | 2021-05-13 | - | Croatian Language for Beginners | 4 | 1.0 |

(signature)

Document Unique Code

EPICUR EUROPEAN UNIVERSITY

# EPICUR European University

## Learning Agreement

Academic Period: 2021-2022 Fall

DocNo: 2021/12/0016

| | | | |
|---|---|---|---|
| **Student last name:** | **Ramberg** | **First name:** | **Tobias** |
| Date of birth: | 2000-10-06 | Gender: | Male |
| Place of birth: | Munich | Matriculation number: | 20180032025555 |
| Country of birth: | Germany | | |

| | |
|---|---|
| **Name of sending institution:** | **Karlsruhe Institute of Technology** |
| Faculty: | - |
| Address: | Karlsruhe Institute of Technology Hermann-von-Helmholtz-Platz 1 76344 Eggenstein- |

| Receiving Institution Acronym | Receiving Institution Name |
|---|---|
| UNISTRA | University of Strasbourg |
| UVA | University of Amsterdam |
| AUTH | Aristotle University of Thessaloniki |
| BOKU | University of Natural Resources and Life Sciences |
| KIT | Karlsruhe Institute of Technology |
| UHA | University of Upper Alsace |
| FREI | University of Freiburg |
| AMU | Adam Mickiewicz University in Pozna |

*Figure 51: Examples of requests: a) Transcript of Records, b) Learning Agreement*

### 2.4.4 Create Request

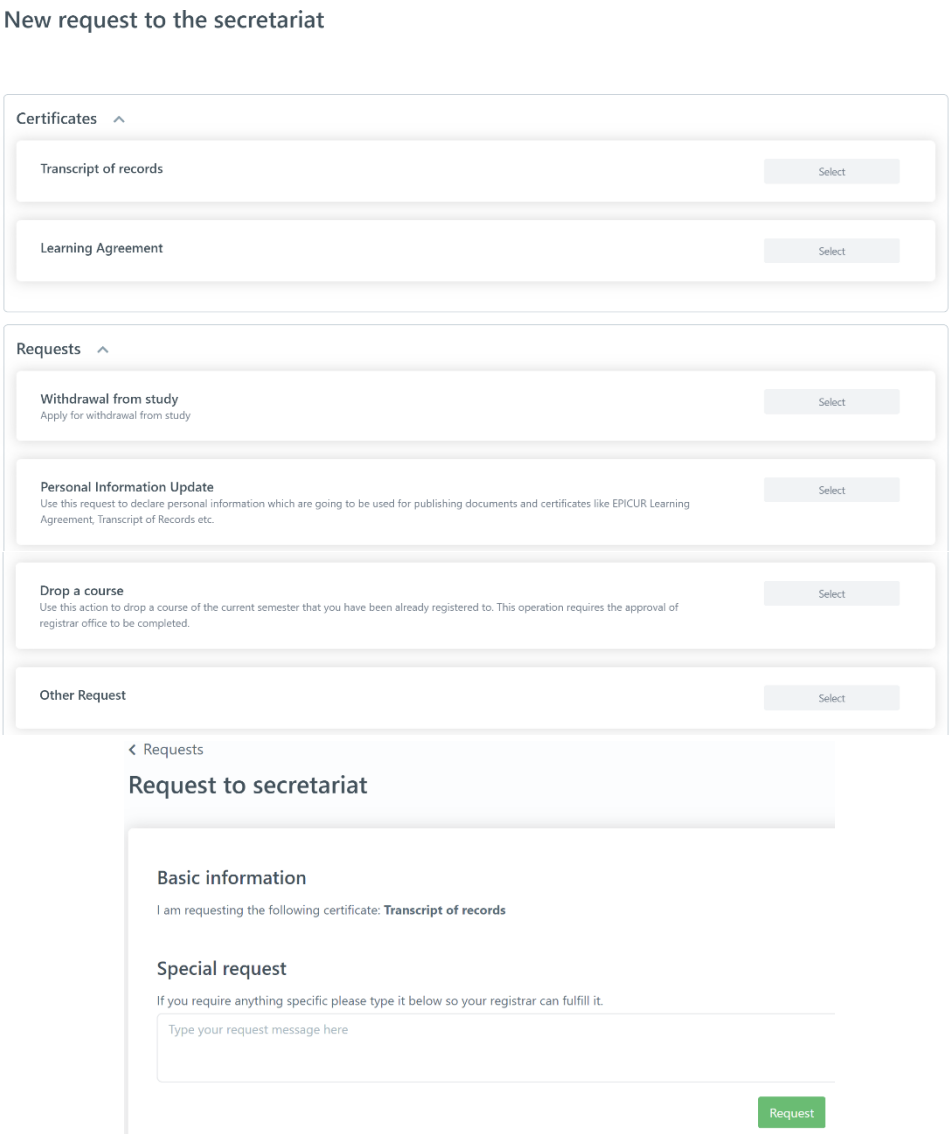


*Figure 52: Create Request functionality: a) List of requests, b)Transcript of records request form*

*Table 50: Create Request functionality*

| **Functionality Name** | Create Request |
|---|---|
| **Actors** | Students |
| **Input Data** | Information about the request to the registrar (Depends on the request) |
| **Description** | The user can view his/her requests by following the steps:<br>1. selects the **Support->Requests** option from the VURS's menu bar<br>2. clicks **+ New Request** button<br>3. selects the type of request between Certificates (Transcript of records, Learning Agreement) and Requests (Withdrawal from study, Personal Information Update, Drop a course, Other Request)<br>4. completes the request form by providing information to the registrar and clicks **Request** button. |
| **Output Data** | The **Requests to the Secretariat** is loaded and the request would be added as Active in the list of requests. |

## 2.5 Lecturers

### 2.5.1 Preview Main Information

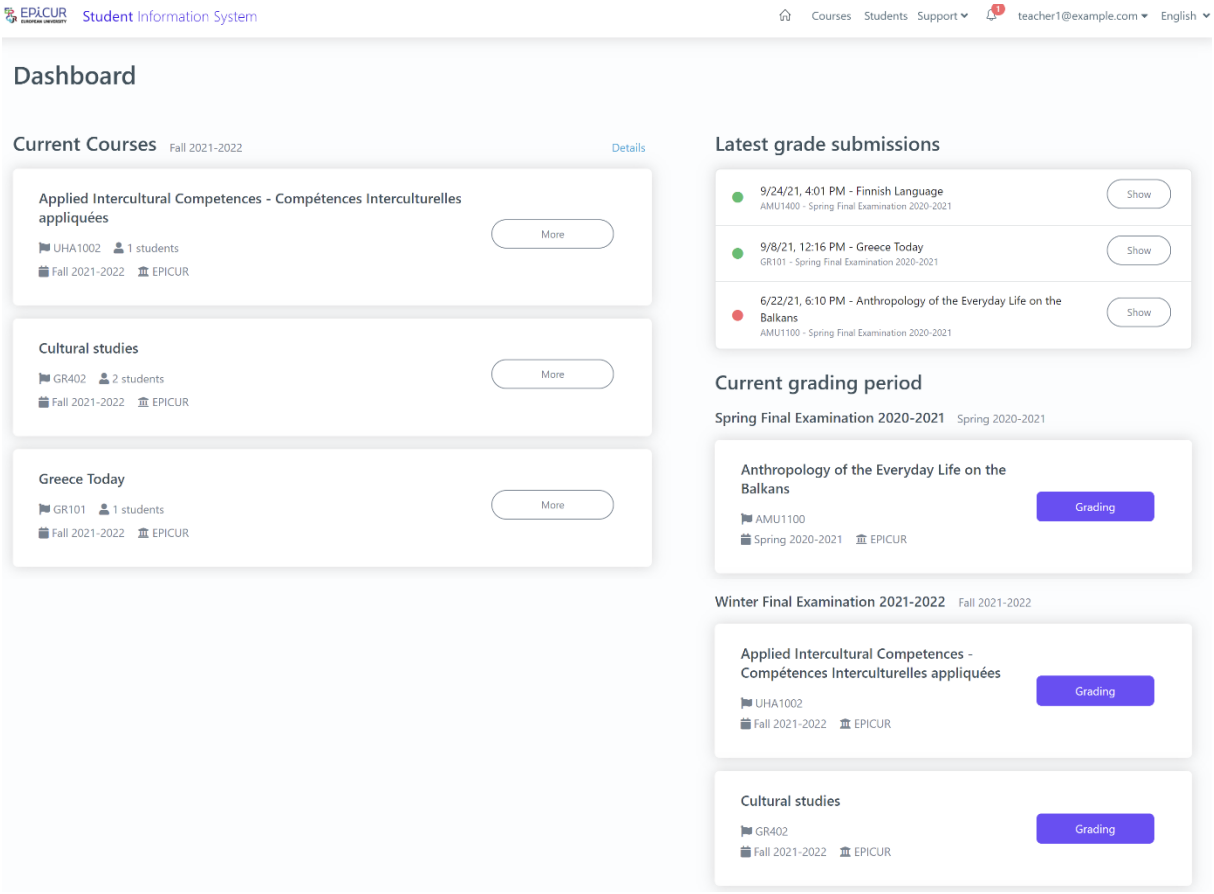


*Figure 53: Preview Main Information functionality*

*Table 51: Preview Main Information functionality*

| **Functionality Name** | Preview Main Information |
|---|---|
| **Actors** | Lecturers |
| **Input Data** | - |
| **Description** | The user can view the main information about his/her courses by following the steps:<br>1. selects the home icon from the VURS's menu bar |
| **Output Data** | The page with the main user's information about courses is loaded which are: current courses, latest grade submissions, current grading period. |

### 2.5.2 Search Courses

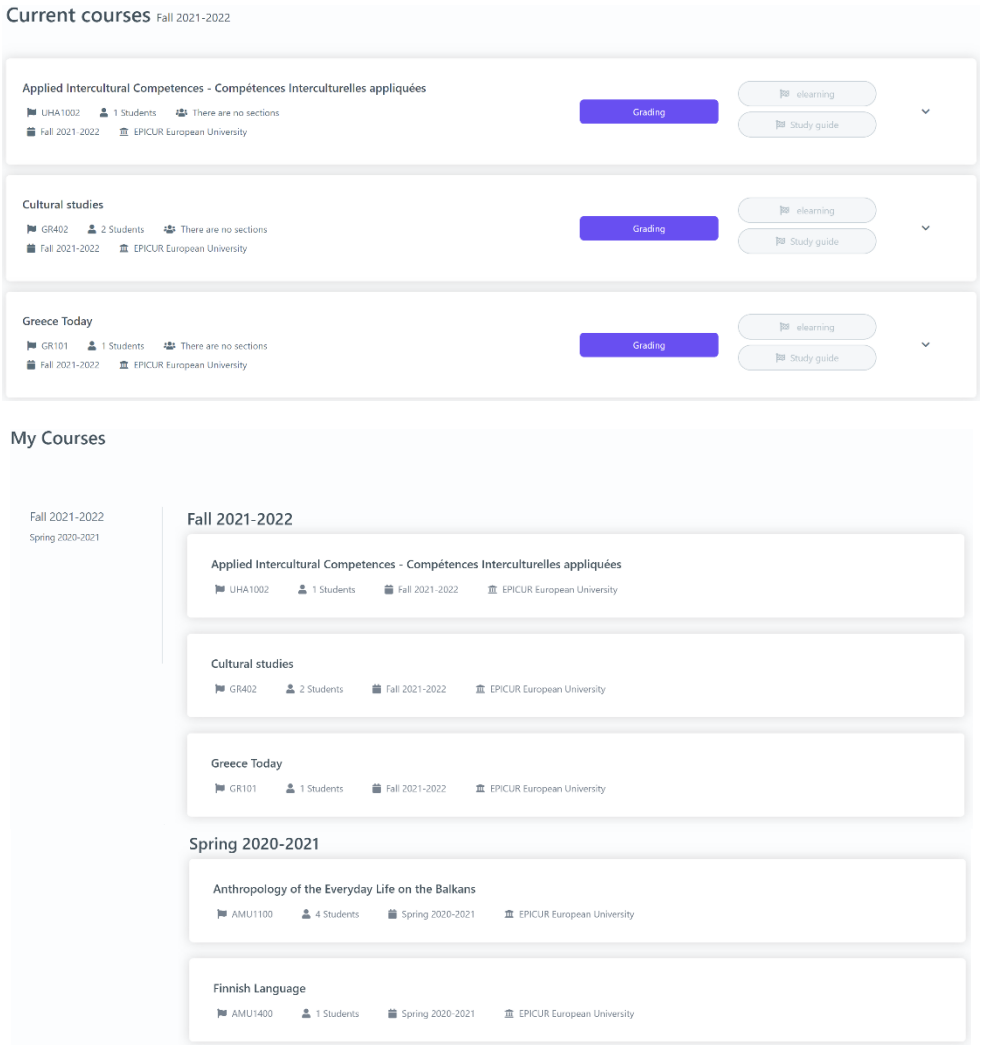


*Figure 54: Search Courses functionality: a) Current courses, b) My courses*

*Table 52: Search Courses functionality*

| **Functionality Name** | Search Courses |
|---|---|
| **Actors** | Lecturers |
| **Input Data** | - |
| **Description** | The user can search for a group of his/her courses or a specific course by following the steps:<br>**For Current courses**:<br>1. selects the **Courses->Current courses** option from the VURS's menu bar<br>**For My courses**:<br>1. selects the **Courses->My courses** option from the VURS's menu bar<br>2. finds course by searching/filtering them by academic period |
| **Output Data** | A list of the courses that satisfy the defined requirements appears. |

### *2.5.3 Preview Course Class*

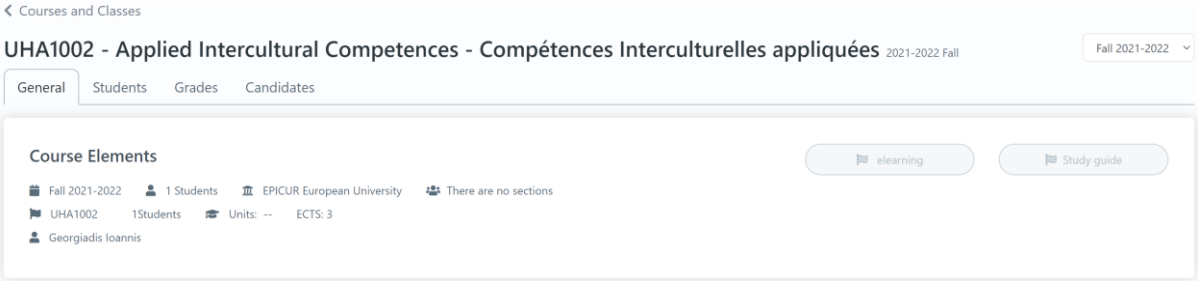


*Figure 55: Preview Course Class functionality*

*Table 53: Preview Course Class functionality*

| **Functionality Name** | Preview Course Class |
|---|---|
| **Actors** | Lecturers |
| **Input Data** | - |
| **Description** | The user can preview a course class by following the steps:<br>**From Current courses**:<br>1. searches for a specific course on **Current courses** page<br>2. clicks arrow icon<br>3. selects **More** option<br>**From My courses**:<br>1. searches for a specific course on **My courses** page<br>2. clicks on the specific course |
| **Output Data** | The page with all the class's information is loaded where there are four tabs: General, Students, Grades, Candidates. |

### 2.5.4 *View Class Students*

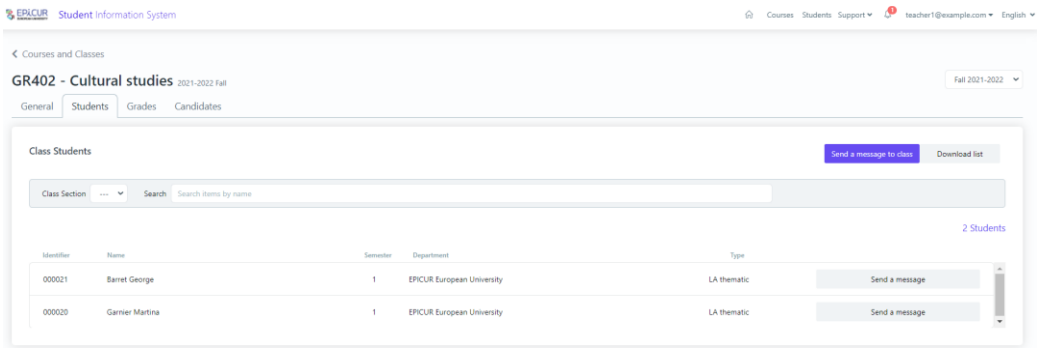


*Figure 56: View Class Students functionality*

*Table 54: View Class Students functionality*

| **Functionality Name** | View Class Students |
|---|---|
| **Actors** | Lecturers |
| **Input Data** | **Communicate with students**: Subject, Short message, Attach File (optional) |
| **Description** | The user can view the students of a class, communicate with them and download a list of their information by following the steps:<br>1. visits the preview page of a course class<br>2. selects the **Students** tab<br>**To communicate with students**: |

| | |
|---|---|
| | 3. clicks **Send a message to class** button to communicate with all the students or clicks **Send a message** button to a specific student to communicate with him/her.<br>4. completes the message form (Subject, Write a short message, attach file) and sends it<br>**To download list of students**:<br>3. clicks **Download list** button |
| **Output Data** | The list with all the students of the class is loaded.<br>For "Send message" action, a loading bar appears and after the completion the popup form closes.<br>By clicking the **Download list** button, the file with students' information of the class is downloaded to the user's computer. |

### *2.5.5 Grade students*

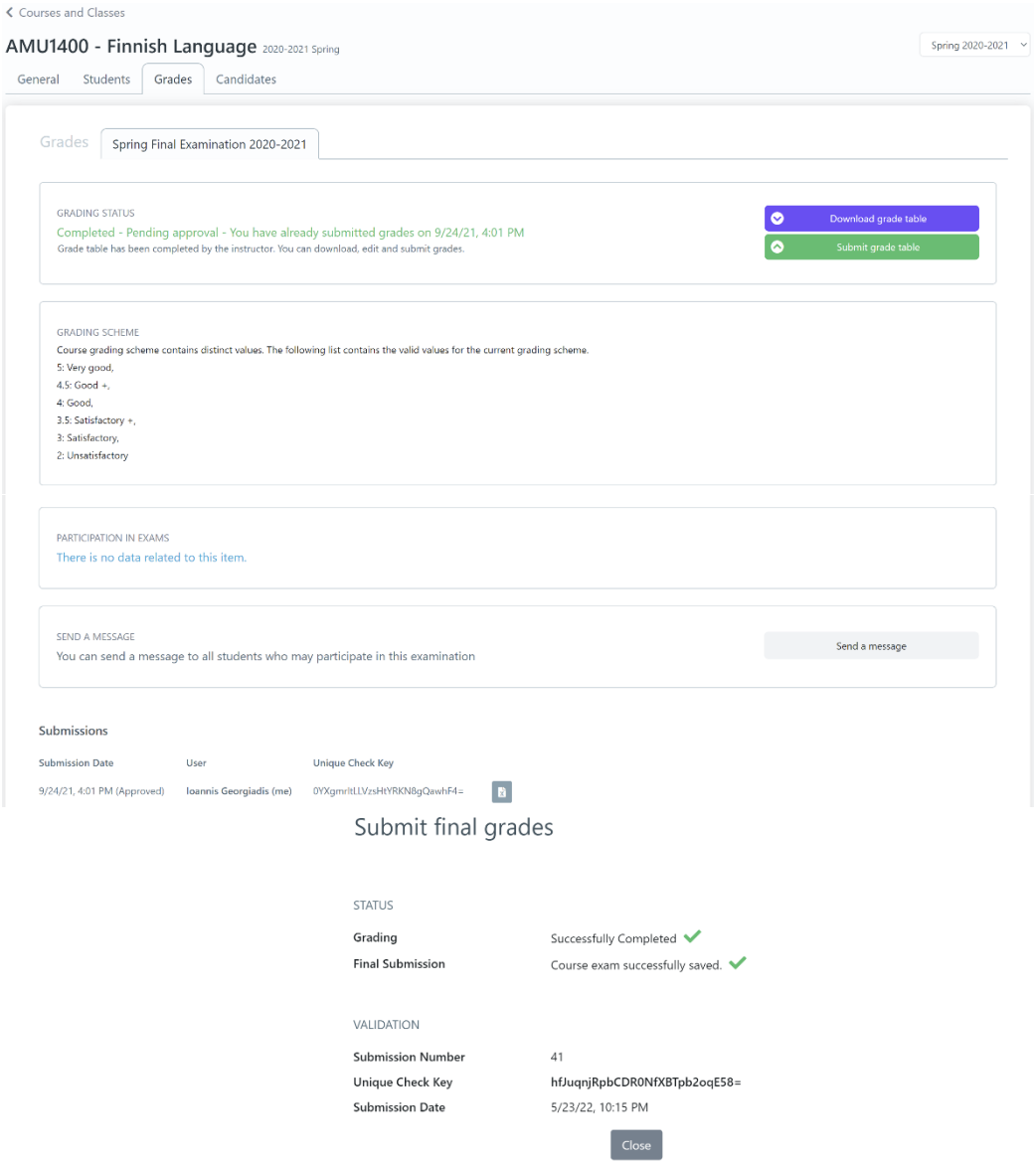


*Figure 57: Grade Students functionality: a) Grades page of a course class, b) completion of submission*

*Table 55: Grade Students functionality*

| **Functionality Name** | Grade Students |
|---|---|

| | |
|---|---|
| **Actors** | Lecturers |
| **Input Data** | Grade table file |
| **Description** | The user can grade the students of a class by following the steps:<br>1. visits class students page<br>2. clicks **Download list** button to download the list of students' information where there is a column with the name Grade.<br>3. after preparing grade table file, selects **Grades** tab on the preview page of the course class<br>4. clicks **Submit grade table** button<br>5. uploads grades file and clicks **Upload and continue** button<br>6. clicks **Accept and finalize** button to complete submission you will be informed about your submission status<br>On the Grades page, the user can view the submission status under the **Submissions** section. |
| **Output Data** | Information about the status and proof of submission appears. |

## 2.6 Candidates

### *2.6.1 View Mobility Applications*

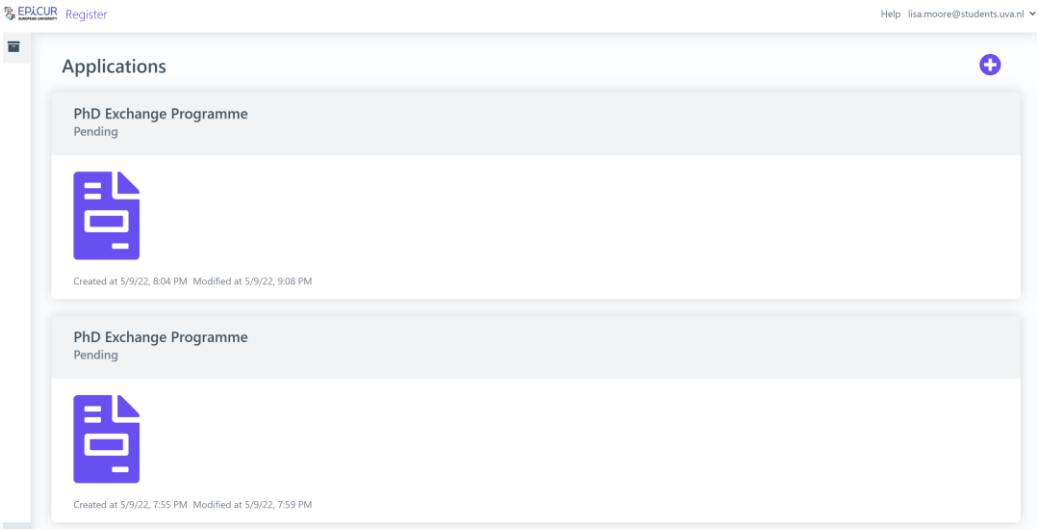


*Figure 58: View Mobility Applications functionality*

*Table 56: View Mobility Applications functionality*

| | |
|---|---|
| **Functionality Name** | View Mobility Applications |
| **Actors** | Candidates |
| **Input Data** | - |
| **Description** | The user can view his/her applications and their status by following the steps:<br>1. selects the home option from the VURS's sidebar menu |
| **Output Data** | The page with the list of user's applications and their status is loaded. |

### *2.6.2 Submit Mobility Application*

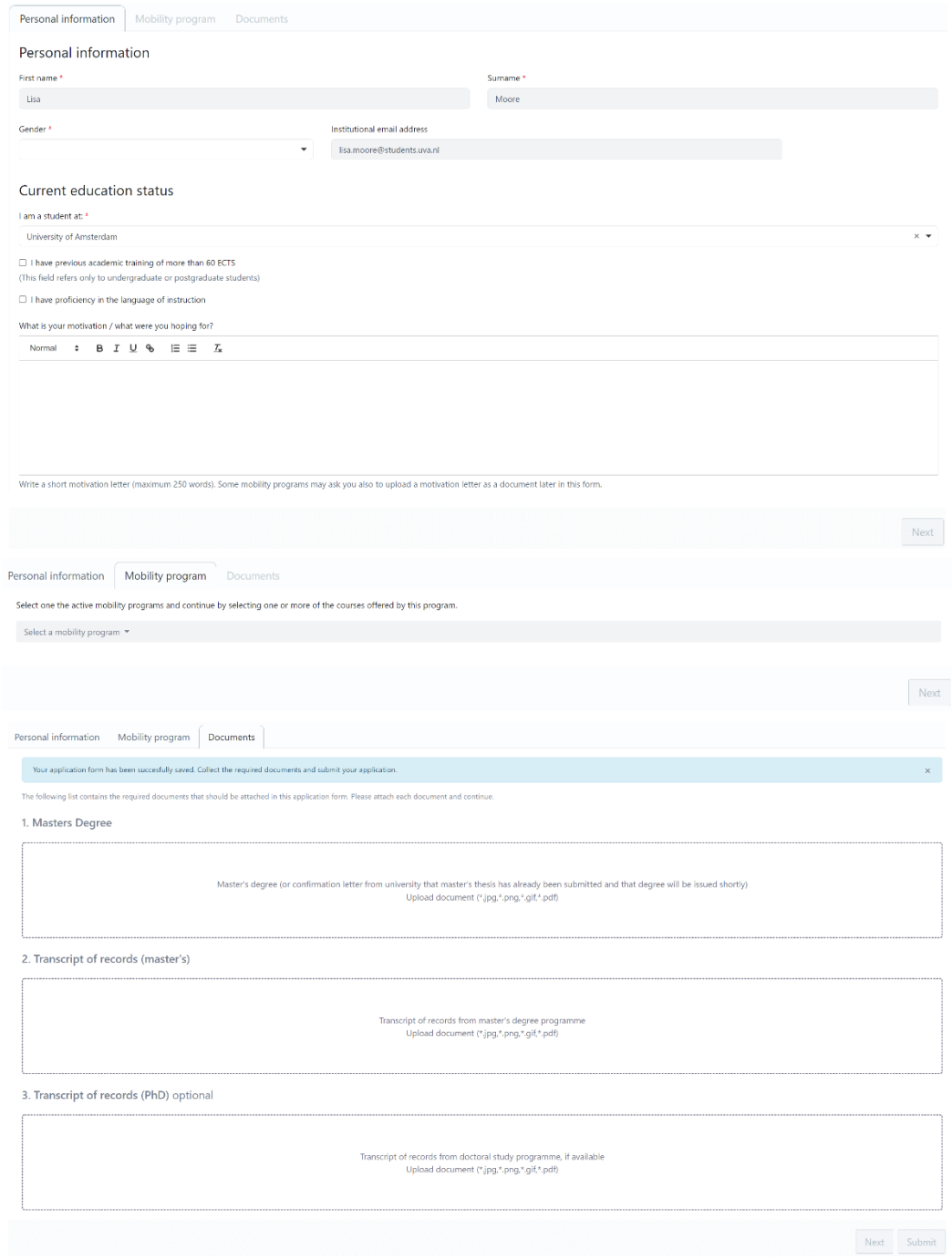


*Figure 59: Submit Mobility Application functionality a) Personal Information tab, b) Mobility program tab, c) Documents tab*

*Table 57: Submit Mobility Application functionality*

| **Functionality Name** | Submit Mobility Application |
|---|---|
| **Actors** | Candidates |
| **Input Data** | • **Personal Information**:<br>– Required: First Name, Surname, Gender, I am a student at (Current education status)<br>– Optional: (Current education status) I have previous academic training of more than 60 ECTS, I have a |

| | |
|---|---|
| | proficiency in the language of instruction, What is your motivation / what were you hoping for?<br>• **Mobility program**:<br>– Required: Select a mobility program, Select courses<br>• **Documents**:<br>– Required: Upload documents<br>– Optional: Upload proficiency in focus language, Upload proof of enrolment |
| **Description** | The user can apply for a mobility program by following the steps:<br>1. selects plus sign button on the dashboard<br>2. completes the application where there are three tabs (clicks **Next** button to navigate to the next tab): Personal Information (completes a form), Mobility program (selects mobility and courses), Documents (upload documents). For some types of documents exist a template document that can be downloaded by clicking **Download document template** button.<br>3. submits the application<br>4. finalizes submission by clicking **OK** button on the confirmation popup window that is shown |
| **Output Data** | The user receives an email about his/her submission and the application is in the list of applications in dashboard. |

### *2.6.3 Preview Mobility Application*

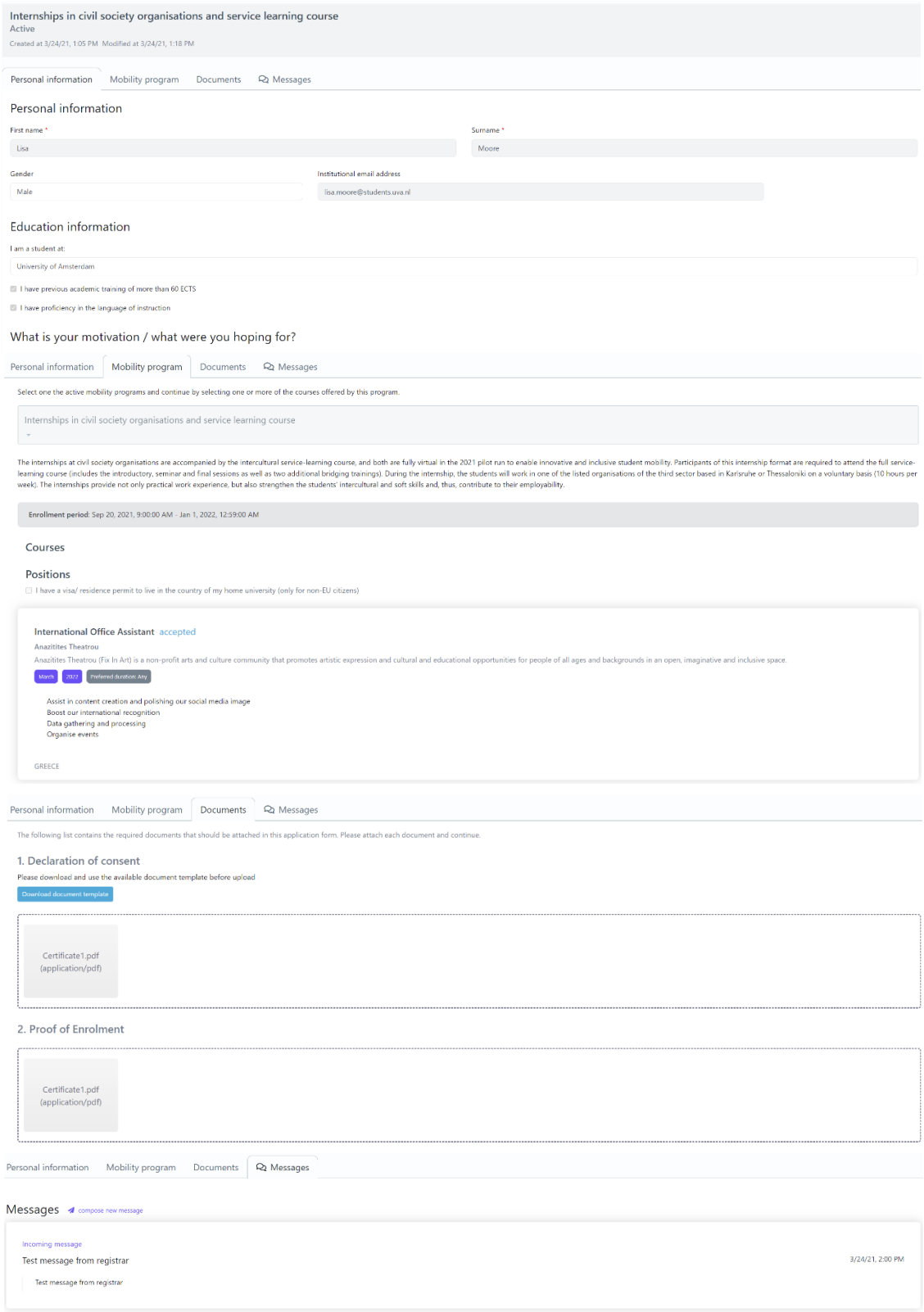


*Figure 60: Preview Mobility Application functionality a) Personal Information tab, b) Mobility program tab, c) Documents tab, d) Messages tab*

*Table 58: Preview Mobility Application functionality*

| **Functionality Name** | Preview Mobility Application |
|---|---|
| **Actors** | Candidates |

| | |
|---|---|
| **Input Data** | • **Personal Information**:<br>– Required: First Name, Surname, Gender, I am a student at (Current education status)<br>– Optional: (Current education status) I have previous academic training of more than 60 ECTS, I have a proficiency in the language of instruction, What is your motivation / what were you hoping for?<br>• **Mobility program**:<br>– Required: Select a mobility program, Select courses<br>• **Documents**:<br>– Required: Upload documents (Depends on the mobility's requirements)<br>– Optional: Upload documents (Depends on the mobility's requirements)<br>• **Messages**:<br>– Required: Short message<br>– Optional: Subject |
| **Description** | The user can preview a mobility application's information by following the steps:<br>1. selects an application from applications list by clicking it on the dashboard<br>**To complete a pending application**:<br>2. changes the application's information where there are three tabs (clicks **Next** button to navigate to the next tab): Personal Information, Mobility program (changes courses), Documents (upload documents)<br>3. submits the application<br>4. finalizes submission by clicking **OK** button on the verification popup window that is shown<br>**To communicate with registrar (pending and active applications)**:<br>2. selects **Messages** tab<br>3. clicks **Compose a new message**<br>4. completes the message form (Subject, Write a short message) and sends it |
| **Output Data** | The page with all the application's information is loaded where there are four tabs: Personal Information, Mobility program, Documents, Messages.<br>For "Send message" action, the result is shown in the application's **Messages** tab.<br>For "Complete a pending application" action, the user receives an email about his/her submission. |

# 3 Virtual Campus Learning Platform (VCLP)

This section is presenting briefly the VCLP landing pages and the process of the decentralised course delivery in EPICUR using VCLP and the local (institutional) Learning Management Systems (LMSs).

## 3.1 Introduction

The VCLP is a full Learning Management System, based on ILIAS. It is completely web-based, hence requires only a web browser and no additional software to use it. Important information about the course offerings for students from the EPICUR partners are offered though the public available part of the VCLP (chapter 4.2). Login is possible with your existing university account (chapter 4.3). EPICUR courses can be directly hosted on the VCLP. However, the VCLP is also integrated with local LMS running at each university through a decentralized LMS server. In such a way the EPICUR courses offered can be hosted on local LMS servers. EPICUR students from other universities can access the courses though the VCLP (chapter 4.4)

## 3.2 VCLP landing page

The VCLP offers a comprehensive landing page, where the different mobility programs are offered in large tiles in the typical EPICUR colour scheme. There are also large buttons to log in, to apply for EPICUR courses via the VURS and a support and help page. Also, news are shown for upcoming EPICUR events. The page is designed in such a way, that it is also easily readable on mobile devices. With limited space the layout of the page is adjusted accordingly. The main landing page is available for every visitor of the VCLP, a login is not required.

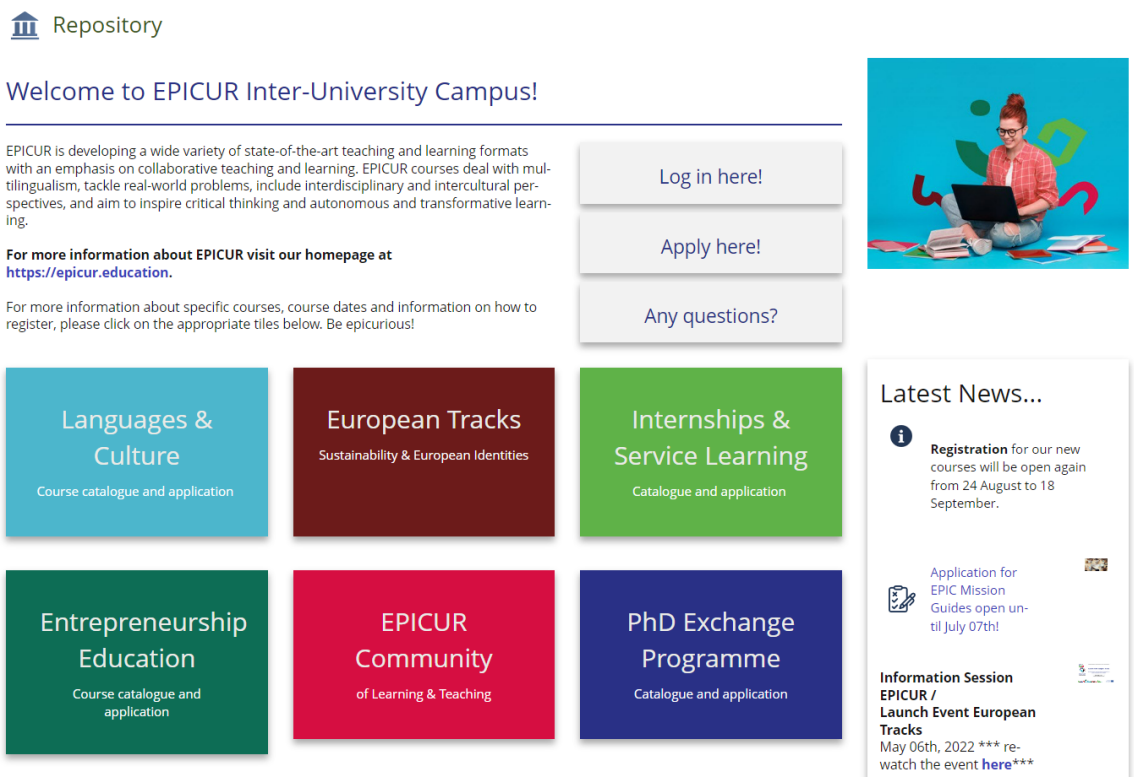


*Figure 61: The Landing Page of the VCLP*

By clicking on one of the large, coloured tiles of the mobility program, the course catalogue is displayed. This course information is directly fetched from the VURS system by using a request in the background. This has the advantage that the course information only must be entered once by the EPICUR administrative stuff at the local university. Interested students can browse the course catalogue and if

logged in find a direct link to register for those courses. In addition, the VCLP also provides a help forum for students.

*Figure 62: Languages & Culture mobility program page*

In order to maintain the clarity and a good overview of the available courses, the course catalogue in the VCLP is showing only a subset of all available attributes of a course, which consists of the most important information. If a student is interested in a course in detail, a link to the detailed course catalogue in the VURS is available.

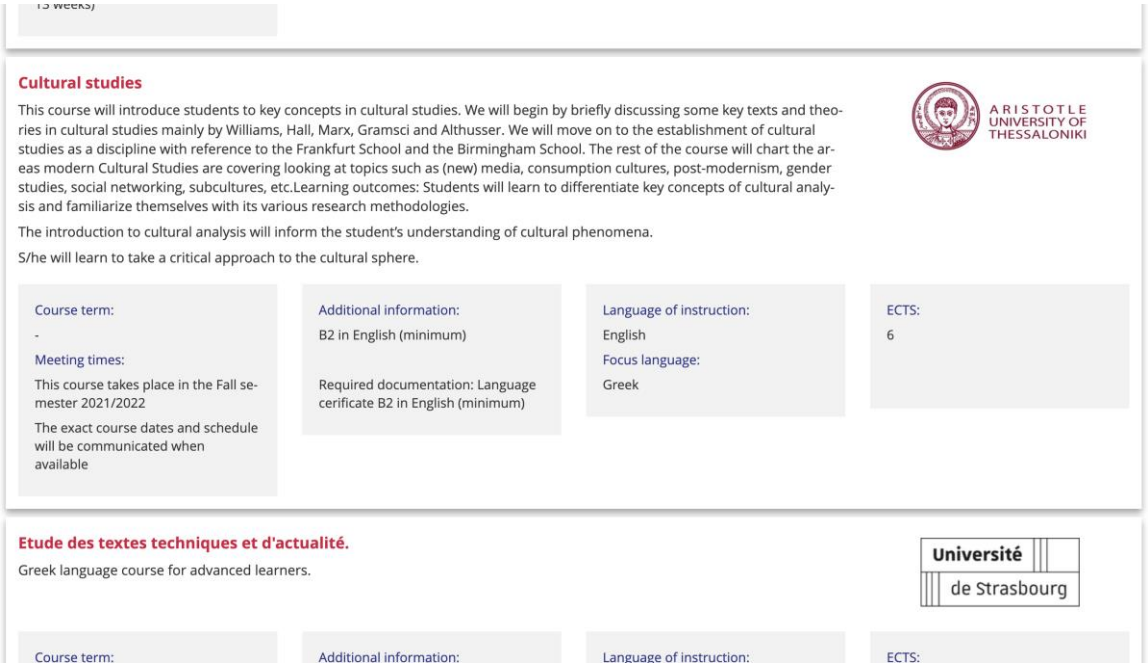


*Figure 63: Example of one EPICUR course as displayed in the VCLP course catalogue*

## 3.3 Single Sign On

To access your courses or use non-public functionalities of VCLP as a teacher or student it is required to log in. VCLP does not require to register a new account. Instead, VCLP offers a Single Sign On mechanism, where the existing local account each member already has at their university is used for authentication. In such a way it is not necessary to store passwords on the VCLP. In addition, due to the Single-Sign-On aspect of Shibboleth, entering your user credentials is not required if you have already signed in on the Identity Provider for using another university system.

*Figure 64: Login Screen of the VCLP – Selection of the home institution*

The VCLP stores no passwords, but other personal data of EPICUR members, like first name, last name and email address. Since the VCLP is self-hosted by the Karlsruhe Institute of Technology, the KIT is also the responsible party or so-called "Controller of Data Processing". The KIT hosts the VCLP on its own infrastructure at the "Steinbuch Centre for Computing" (SCC) and does not use any cloud storage outside the KIT facilities. The data privacy policy describes the rights for users according to the "General Data Protection Regulation" (GDPR) of the EU and states the technical measures the KIT has taken to protect the personal data from abuse.

## 3.4 Decentralized course delivery

Offering an EPICUR course directly on the VCLP requires the teachers in many cases to get familiar with a new Learning Management System. This requires additional training and support, which is time-consuming and might often costs money. This is especially true if you are not yet familiar with the ILIAS LMS. In addition, the same offered courses for EPICUR students are also offered as local courses at the university. In these cases, teachers would have to offer the same course on two different learning platforms (VCLP and local Learning Management System). Moreover, since both groups of students are in different LMS, they do not have the ability to communicate with the other student group via the platform (like chat, forums, comments etc.)

To overcome these limitations, the VCLP does use the feature to connect it to other LMS. This is achieved by bridging the VCLP to the other local LMS via a central middleware (Decentralized LMS server). This middleware is a message-based platform, which receives events as messages from one connected Learning Platform and routes this message to other Learning Platforms. This middleware platform is completely invisible to normal users and works in the background.

Any data exchange between the LMS and the Decentralized LMS server is done in a secured and encrypted way. The authentication of the LMS to the Decentralized LMS server is done by SSL client-certificates, so no third party gets access to the Decentralized LMS server or the connected LMS. Only

client certificates issued by the KIT can be used to identify and authenticate an approved LMS. The encryption of the messages is done by standardized Transport Layer Security (TLS).

The Decentralized LMS server is used in the EPICUR context for two important features:

- Course sharing from local LMS to the VCLP
- Course access to the local course from the VCLP

### 3.4.1 Course sharing

A course on one LMS can be shared (or released) with other connected LMS. While this would technically allow any course on one LMS to appear on all other platforms, this feature is restricted by administrative settings in such a way that it is only possible to share courses from local LMS to the VCLP. In the connected local LMS course settings an additional option is provided. Using this setting course administrators can share (or "export", "release") an existing course to the VCLP. This can be set for each course individually.

If a course administrator chooses to share a course to the VCLP, the course will appear on the VCLP in the main category "My EPICUR courses". This category is linked directly from the landing page if the user is logged in. In addition to the name of the course a short description is also optional available. It also states the university on which the course is hosted.

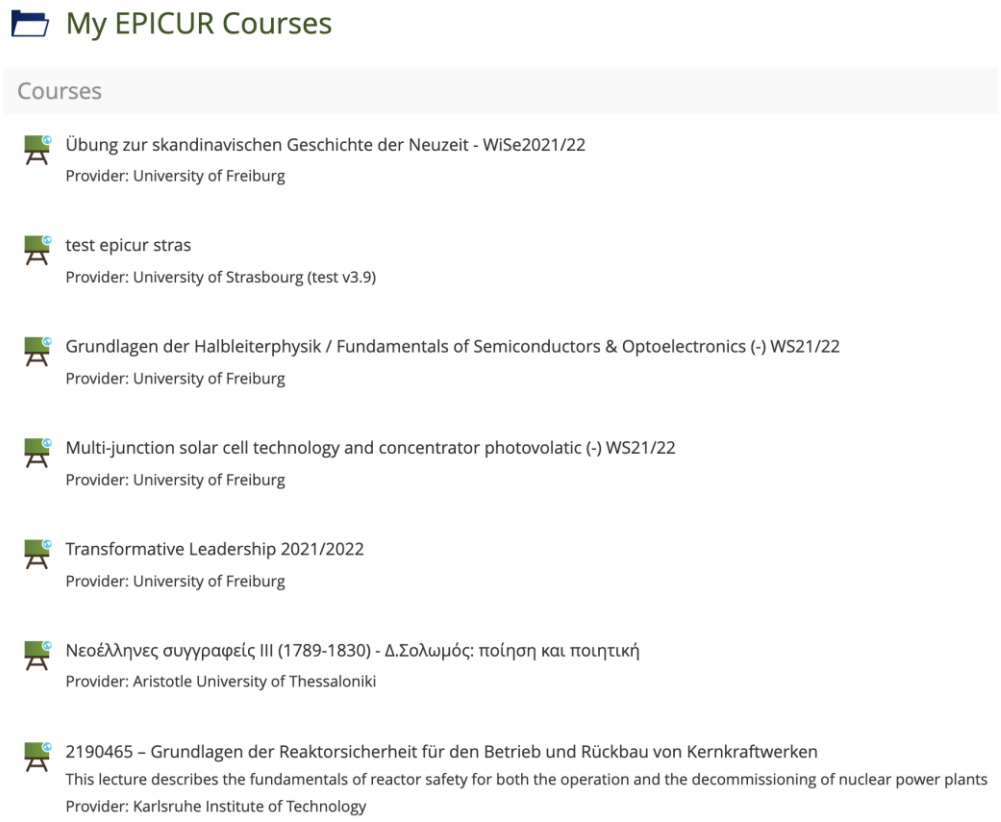


*Figure 65: The "My EPICUR courses" category contains the available courses for a student*

However, any shared course will be at first invisible to any user except VCLP administrators. Only students who have been approved for a course will be able to see the course link. This is achieved through the VURS transmitting the approved user accounts to the VCLP via a web service. In doing so the students will have a better overview of their accessible courses and are not confused with a long list of inaccessible courses.

### 3.4.2 Course access

By clicking on a course that has been shared from a local LMS to the VCLP in the "My EPICUR courses" category, the logged in user will be directly forwarded to the local LMS and if necessary, a

new user account on the local LMS will be created. This account is special in such a way, that it is for EPICUR students only and allows access to the local course. By Decentralized LMS server design it is always prefixed with the organization name set in the Decentralized LMS server, which is “EPICUR_” for the VCLP. For example, if a user has the VCLP account “john.doe@kit.edu”, the username on the local LMS will be “EPICUR_john.doe@kit.edu”.

Technically the authentication between the VCLP and the local LMS is done via the Decentralized LMS server. On clicking a course link on the VCLP, a special random token combined with a computed value (hash) of several user attributes is generated by the VCLP and transmitted to the Decentralized LMS server. Then the user will be forwarded to the course on the local LMS. Thereby also user attributes, like username, first and last name and email address are transmitted in the URL. The local LMS reads also the VCLP token from the Decentralized LMS server, calculates the hash value again and compares it. If both values match, the user is successfully authenticated. This process happens in the background and usually takes less than a second, so it is completely transparent to the user and does not disturb the user experience.