

MUSKET Web Tools tutorial



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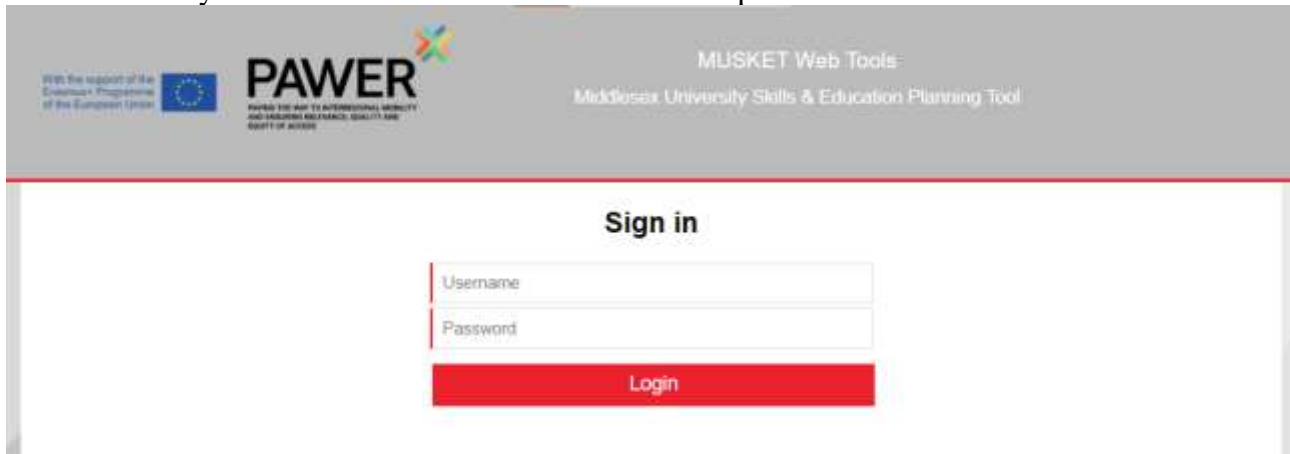
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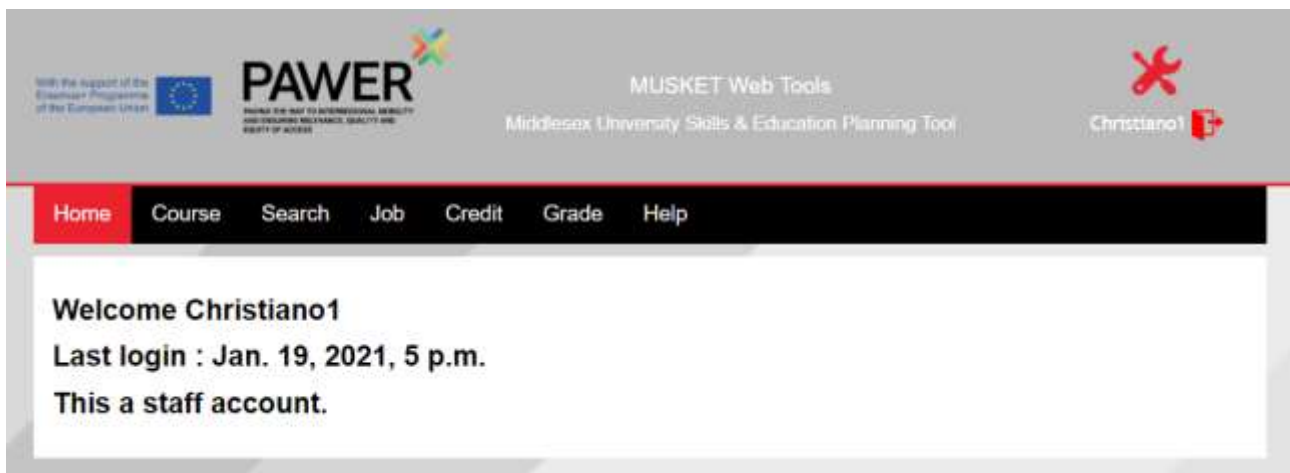
1. Home

To access the system the user must have a username and password.



The screenshot shows the login interface for the PAWER system. At the top left, there is a logo for PAWER (Partnership for Access, Work, and Education Research) with the tagline "PAWER: FINDING THE WAY TO PROFESSIONAL SKILLS AND INCLUSIVE INFLUENCE, QUALITY AND RIGHT OF ACCESS". To the right of the logo, it says "MUSKET Web Tools" and "Middlesex University Skills & Education Planning Tool". Below the header, the text "Sign in" is centered. There are two input fields: "Username" and "Password". Below these fields is a red "Login" button.

After successfully login, the home page shows the user account name, current time, and what kind of account it is (staff, account, admin...)



The screenshot shows the home page after a successful login. The header is the same as the login page, but now includes a red wrench icon and the text "Christiano1" on the right. Below the header is a navigation bar with the following links: Home, Course, Search, Job, Credit, Grade, and Help. The main content area displays the following text: "Welcome Christiano1", "Last login : Jan. 19, 2021, 5 p.m.", and "This a staff account."

2. Course

The first menu allows the user to add a university module content.

As different university have different document structure, with different headings, a template structure must be set up. This has to be done only once per document structure.

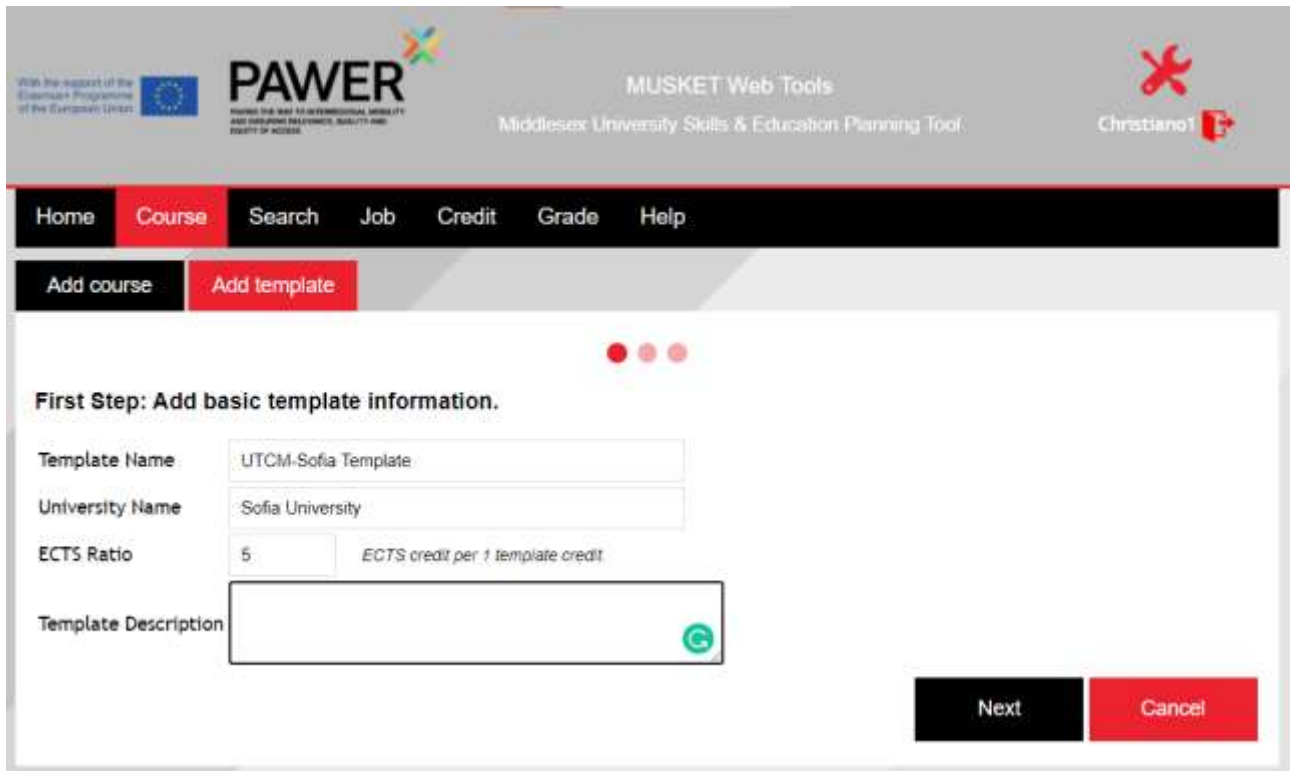
2.1 Course -> Add template

Template name: whatever is relevant for the user to find after

University name: used when searching for the template

ECTS Ratio: optional

Template description: it can be used to explain what this template structure is going to be used for.



The screenshot shows the 'Add template' form in the MUSKET Web Tools interface. The form is titled 'First Step: Add basic template information.' and contains the following fields:

- Template Name:** UTCM-Sofia Template
- University Name:** Sofia University
- ECTS Ratio:** 5 (with a note: *ECTS credit per 1 template credit*)
- Template Description:** A large text area with a green circular icon in the bottom right corner.

At the bottom right of the form, there are two buttons: 'Next' (black) and 'Cancel' (red).

The next step is where the user writes down all the document headings on the left-hand side (as they are on the official document) and associate it with one of the XCRI-CAP fields. The association is required when comparing content from different templates or universities content.

For this example, the “Environmental protection and sustainable development b771_R (EN).doc” file is used. Here is an screenshot from the content:

University of Chemical Technology and Metallurgy - Sofia

Course Code: b771	Title: Ecology and Sustainable Development – for full time students
Semester: VI	Degree title: Engineering Ecology and Environmental Protection Level - Bachelor
Summary: The course aims at: <ul style="list-style-type: none"> - Giving knowledge about fundamentals of Ecology as well as about the main components and processes of environment; - Showing the increasing interaction and interdependence between the development of society and environmental changes; - Explaining the nature of the above interdependences and showing the danger of environmental catastrophe and the end of natural resources as a result of man activities; - Describing the concept of sustainable development as a possibility for the society survival. 	
Interdisciplinary connections: Organic Chemistry, Physical Chemistry, Fundamentals of Biotechnology	
Course content: Organisms, resources and environmental conditions. Populations communes (co-societies). Ecosystems. Food chains. Food networks and levels. Energy pyramid. Primary and secondary succession. Food mineral cycles. Material and energy balances. Society and its impact on the environmental components. Anthropogenic losses in the variety of bio species. Sustainable development of society and its indicators	
ECTS allocation: Contact hours – 3,0.; Selfpreparation – 3,0., incl. 1. Preparation for exam – 1,0. 2. Paper preparation – 1; 3. Preparation of reports for laboratory exercises – 0,5; 4. Consultations with the teacher – 0,5.;	
Recommended literature: <ol style="list-style-type: none"> 1. Begon M., J.Harpet, C.Townsend, Ecology, Individuals, Population and Communities, Blackwell Scientific Publications, 1990. 2. Odum E., Basic Ecology, Saunders College Publishing, 1983. 3. Arms K., Environmental Science, Saunders College Publishing, 1990. 4. Nath B., L.Hens, D.Devuyt, Sustainable Development, VUBPRESS, Brussels, 1996. 5. Nath B., L.Hens, D.Devuyt, Environmental Management, VUBPRESS, Brussels, 1994. 6. Duke C., C.D.Williams, Chemistry for Environmental and Earth Sciences, Taylor&Francis Group, 2008. 	
Final grade components: Paper defense: – 20%; Written exam: - 80 %	



Home Course Search Job Credit Grade Help

Add course

Add template



Final Step: Filling heading type from XCRI-CAP

Heading	XCRI-CAP Element
Course Code	catalog > provider > course > (identifier)
Title	catalog > provider > course > (title)
Semester	NO matching XCRI-CAP
Degree title	NO matching XCRI-CAP
Summary	catalog > provider > course > presentation > (description)
Interdisciplinary connections	NO matching XCRI-CAP
Course content	catalog > provider > course > (learningOutcome)
ECTS allocation	catalog > provider > course > (credit)
Recommended literature	catalog > provider > course > (prerequisite)
Final grade components	catalog > provider > course > (assessment)

Back

Submit





Cancel

The screenshot shows the MUSKET Web Tools interface. At the top, there are logos for PAWER (Partnership for Action on Workforce Education Research) and the European Union, along with the text "MUSKET Web Tools" and "Middlesex University Skills & Education Planning Tool". A user profile for "Christiano1" is visible in the top right. A navigation bar includes "Home" and "Course". A white notification box with a green checkmark displays the message: "The UTCM-Sofia Template template has been created successfully." Below this, the "Add course" section is active, showing a form titled "First Step: Add basic template information." The form contains fields for "Template Name" (placeholder: "Enter Template Name"), "University Name" (placeholder: "Enter University Name"), "ECTS Ratio" (with a sub-field for "ECTS credit per 1 template credit"), and "Template Description". "Next" and "Cancel" buttons are at the bottom right.

2.2 Course -> Add course

After creating the template, the user can now upload the relevant document.

The screenshot shows the MUSKET Web Tools interface with the "Add course" section active. The navigation bar includes "Home", "Course", "Search", "Job", "Credit", "Grade", and "Help". Below the navigation bar, there are buttons for "Add course" and "Add template". The "Add course" button is highlighted. Below these buttons, there is a "Document file" section with a file upload field. The field contains a "Choose file" button and the text "No file chosen".

[Home](#) [Course](#) [Search](#) [Job](#) [Credit](#) [Grade](#) [Help](#)

[Add course](#) [Add template](#)

Document file D4-4.4 Synoptic scheme of gra...ed institutions v2 20190930.docx

36%

The system will automatically identify the document headings find which previously stored template corresponds to it, and finally copy its content to the field. The user has the option to edit before submitting it.

Search for template

The following template has been found for this document.

Template details

Template Name : UCTM-sofa Template 1
 University Name : University of Chemical Technology and Metallurgy
 ECTS Ratio :
 Description : University of Chemical Technology and Metallurgy - Sofia

Template headings

Heading	Content
Course Code: <small>An unambiguous reference to the course</small>	<input type="text" value="B771"/>
Title	<input type="text" value="Ecology and Sustainable Development - for full time students"/>

3. Search

3.1 Search -> Compare

Once the institution has uploaded its courses online, it is possible to compare courses from different institutions as shown below. The user can select certain keywords and a simple search will show the instances of the search keywords in both course descriptions using the templates of each institution.

Keywords

Please add your keywords that are will be used in your search

- mathematics ✕
- algebra ✕
- statistics ✕
- calculus ✕
- Algorithm ✕

Universities and Courses selection

Please select the courses from the list to univities.

Course	University	Course
Course A	Middlesex University ▼	Foundation Mathematics (BIO) ▼
Course B	UNIVERSITA DEGLI STUDI DELL'AQUILA ▼	Mathematical Methods ▼
Course C	TECHNOLOGICAL UNIVERSITY OF TAJIKISTAN ▼	Mathematics in economics ▼

The mapping compares those course description headings that are mapped to the same XCRI-CAP field. In this case the Learning Outcome field is used to compare three courses with regards to the keywords entered by the user.

learningOutcome	3	2	0
<p>Knowledge On completion of this module, the successful student will be able to:</p> <ol style="list-style-type: none"> demonstrate familiarity with the basics of numbers and algebra; demonstrate an understanding of common algebraic operations; identify and solve problems involving different types of functions; understand the importance of good methodology when collecting data; identify appropriate descriptive statistics for a simple data set . <p>Skills This module will</p>	<p>Pre-Course di mathematical method: mathematics for economics and financial applications. Algebraic and literal calculation, MCD, mcm. Arithmetic and geometric progressions. Combination calculus; main formulas. equations And inequalities of first and second degree. Power Properties, Logarithms and exponentials. Equations and inequalities with exponentials and logarithms. Properties of radicals and absolute value. Equations and Inequalities with roots and absolute value. Equations and inequalities in the presence of products and Algebraic expressions. Systems of equations and inequalities. Trigonometry: Fundamental formulas and trigonometric functions. Analytical geometry:</p>	<p>As a result of discipline studying students should know:</p> <ul style="list-style-type: none"> the basic constructs, principles and mechanism of modern object-oriented language; be able: <ul style="list-style-type: none"> to define and use classes; to develop applications; to use modern IDE . have an idea: <ul style="list-style-type: none"> about memory volume and performance estimating 	

A summary of the keyword presence in each course is provided as a summary of the comparison and is illustrated below.

Keyword result

Keyword	Number of hits
mathematics	5
algebra	4
statistics	3
calculus	0
Algorithm	0
Total	12

3.2 Search -> Similarity

It is also possible to compare the similarity of the different courses against a set of keywords. This is a very helpful function for those students who need to search for courses that are similar to the ones they have at their own institution. This function can help academics when putting together a learning agreement for student mobility.

Compare **Similarity**

Keywords

programming ^x

XCRI-CAP Field

Course	Similarity percentage
Object-Oriented Programming KHAZAR UNIVERSITY - KHAZAR	8.33 %
Introduction to Programming ILIA STATE UNIVERSITY	4.04 %
Mathematics in economics TECHNOLOGICAL UNIVERSITY OF TAJIKISTAN	2.07 %
Information	

4. Job

4.1 Job -> Search

The MUSKET tool is connected to a number of job search websites, this means that every Friday it downloads the latest jobs that can be searched using the same keyword sets used for searching for a course. This is shown below.

Search Comparison Addition

Add

Data Scientist ✕


Advanced option +

Search for job

35 job(s) were found.




[Data Science Consultant](#)

£ Salary: £60,000 - £80,000 per annum
Post date: 2020-03-15



4.2 Job -> Comparison

The ability to compare actual jobs allows students to check current jobs relating to the courses they wish to study. Students can also check how a specific job relates to their course and see what aspects of the course are necessary for the job.

[Home](#) [Course](#) [Search](#) [Job](#) [Credit](#) [Grade](#) [Help](#)

[Search](#) [Comparison](#) [Addition](#)

Job title: Data Administrator

[retail](#) [construction](#) [administrator](#) [excel](#) [data entry](#) [contract](#) [data administrator](#)
[data clerk](#) [DATA](#) [ERP system](#) [google docs](#) [data validation](#) [erp database](#)

20 course(s) were found.

University	Course	Number of skills matched
Middlesex University	Business Intelligence	29
Middlesex University	Database Systems: Design and Implementation	17
BAKU ENGINEERING UNIVERSITY	Business Law	16
Middlesex University	Marketing Research and Insights	13
TEHRAN STATE UNIVERSITY	Marketing Research and Insights - Informational	0

Therefore, students can see the relevance of their programme of study and specific courses to actual jobs. This can help them decide on course options according to their preferred career path.

4.3 Job -> Addition

As the system is only able to automatically gather data from pre-defined systems, it may not find a jobs which is available at different places. For this reason, the user can click on the Addition tab and add all the relevant details to an specific job.



Home Course Search **Job** Credit Grade Help

Search

Comparison

Addition

Job title

Job description

Job type

Please Select

Logo

No file chosen

Salary

£ £ monthly

Location

Please Select

City / Town

Zip / Postal Code

Start date

dd / mm / yyyy

Please add your required skills with experience for each.

Required skill

Experience in Years

5. Credit

5.1 Credit -> Country

The next step is to proceed with credit recognition. The following figure shows a list of countries and ECTS mappings.

Country	University	Course
---------	------------	--------

Countries comparison

Compare

Comparison result

Hide all countries

Country	ECTS Credit for 1 credit
Australia 1	1.25
Australia 2	0.63
Australia 3	1.25
Brazil	2.5
Canada	2.0
China 1	1.67
China 2	2.0
China 3	2.5
China 4	1.7

Students can compare between specific countries to see the credit equivalence to ECTS.

Countries comparison



Compare

Comparison result

1 credit in Rusian Federation equals 1.0 ECTS credit(s) which equals to 0.4 credit in Brazil

5.2 Credit -> Univeristy

They can also compare different universities as in certain countries several credit systems exist.

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 Middlesex University Skills & Education Planning Tool 

Home Course Search Job **Credit** Grade Help

Country **University** Course

Universities comparison



First university: Second university: **Compare**

Comparison result

1 credit at Sh. Ualikhanov KOKSHETAU STATE UNIVERSITY - KokSU equals **0.6** ECTS credit which equals to **0.6** credit at Middlesex University

5.3 Credit -> Course




Once students have identified the University they wish to have a mobility exchange with they can start adding courses in order to reach the intended number of ECTS for their learning agreement.

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 Middlesex University Skills & Education Planning Tool 

Home Course Search Job **Credit** Grade Help

Country University **Course**

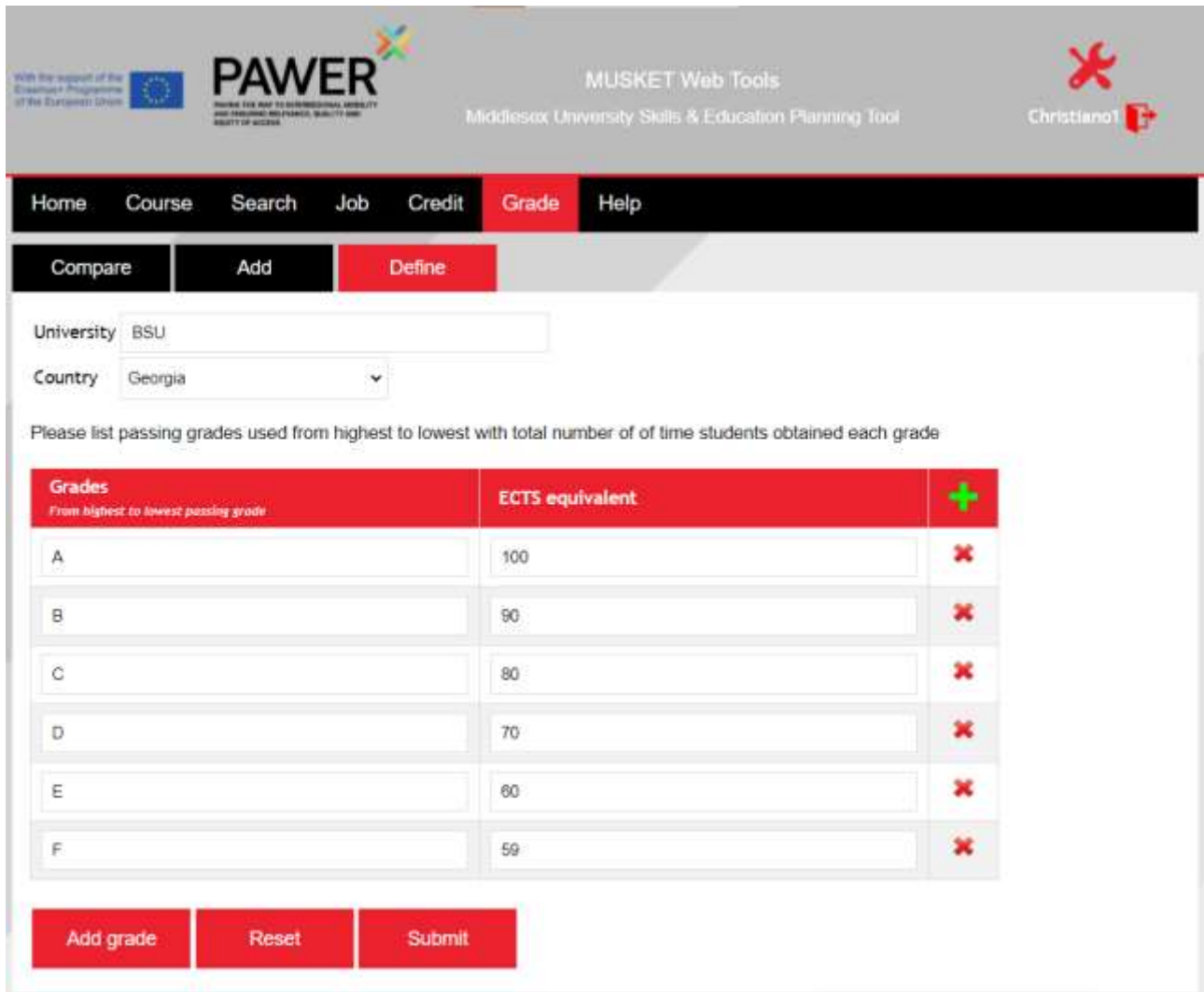
S. Seifullin KAZAKH AGRO TECHNICAL UNIVERSIT Please Select a course **Show Credit**

University	Course	Credit	ECTS Credit	
Middlesex University	Business Intelligence	30	30	
Sh. Ualikhanov KOKSHETAU STATE UNIVERSITY - KokSU	Agronomy	7	4.2	
S. Seifullin KAZAKH AGRO TECHNICAL UNIVERSITY	Plant breeding	5	3	
Total		42	37.2	Delete all

6. Grade

6.1 Grade -> Define

Each institution has an online form to enter grades for the past 3-5 years of a course's assessment. This requires to define its assessment system and map it to ECTS grades.



The screenshot shows the PAWER 'Define' form. At the top, there are logos for PAWER, MUSKET Web Tools, and Christiano1. Below the logos is a navigation bar with 'Home', 'Course', 'Search', 'Job', 'Credit', 'Grade', and 'Help'. The 'Define' tab is selected. The form includes input fields for 'University' (BSU) and 'Country' (Georgia). A instruction reads: 'Please list passing grades used from highest to lowest with total number of of time students obtained each grade'. Below this is a table with three columns: 'Grades', 'ECTS equivalent', and a '+' icon. The table contains six rows with grades A through F and their corresponding ECTS values. At the bottom of the form are three buttons: 'Add grade', 'Reset', and 'Submit'.

Grades <i>From highest to lowest passing grade</i>	ECTS equivalent	+
A	100	×
B	90	×
C	80	×
D	70	×
E	60	×
F	50	×

6.2 Grade -> Add

Once they have defined their grade system, universities need to provide the full grades for each course. For this example, we will be using the grades provided by Batumi Shota University:

BSU
2017 Year

Study course	Number of students	Grade <u>categories and</u> Number of student in each category					
		A	B	C	D	E	F
Macroeconomics	50	2	4	9	10	22	3
Microeconomics	49	1	6	11	15	17	0
Operational management	67	0	6	13	20	25	3
Financial accounting	78	2	8	9	25	33	5
HR Management	72	4	11	17	19	21	0

2018 Year

Study course	Number of students	Grade <u>categories and</u> Number of student in each category					
		A	B	C	D	E	F
Macroeconomics	62	4	9	12	10	26	1
Microeconomics	53						
Operational management	46	2	7	11	8	16	2
Financial accounting	63	4	10	9	15	22	3
HR Management	64	7	5	17	17	12	6

2019 Year

Study course	Number of students	Grade <u>categories and</u> Number of student in each category					
		A	B	C	D	E	F
Macroeconomics	39	0	3	9	10	14	3
Microeconomics	57	3	7	9	19	6	3
Operational management	52	2	6	15	9	18	2
Financial accounting	66	3	9	17	14	22	1
HR Management	59	2	8	15	14	17	3

This is done using the form below.

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PAWER
 PROMOTING THE USE OF BILINGUALISM, QUALITY AND EXCELLENCE IN RESEARCH, QUALITY AND EXCELLENCE IN RESEARCH

MUSKET Web Tools
 Middlesex University Skills & Education Planning Tool

Christiano1

Home Course Search Job Credit **Grade** Help

Compare **Add** Define

Grade Template: BATUMI SHOTA RUSTAVELI STATE UNIVERSITY - E [Not found? Define a new template](#)

Course: Macroeconomics

Faculty: Enter faculty name

Department: Enter department name

Academic year - From /to: January 2017 / December 2017

Please list passing grades used from highest to lowest with total number of of time students obtained each grade

Grades / ECTS equivalent	Total Number <small>Number of time students obtained each grade</small>
Grades / ECTS equivalent 100 / A	2

6.3 Grade -> Compare

The final step is to compare specific grades between two Universities, therefore providing advice for the grade conversion after a student mobility has taken place.

Universities comparison

University A: Uzbekistan | ANDIJAN AGRICULTURAL INS | Biology and genetics

University B: United Kingdom | Middlesex University | Strategic Management Informat

Grade: 4

In grade overlap: Avg Min Max

Convert

Grade **4** (ECTS=B) in "Biology and genetics" at ANDIJAN AGRICULTURAL INSTITUTE - AAI is equivalent to grade **4** (ECTS=A) in "Strategic Management Information System" at Middlesex University.

