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EQUASP DOCUMENTATION SOFTWARE
Software for the on-line Documentation of the
Quality Assurance of Study Programmes

EQUASP DOCUMENTATION SOFTWARE – ADVANCED FEATURES
User Guide

M. Rimondi

Summary

	NOME	RUOLO	FIRMA
Redatto da	*M. Rimondi*	Product Manager	
Approvato da			
Distribuito a			

1. AIM

The document contains the user guide of the ADVANCED FEATURES of the EQUASP DOCUMENTATON SOFTWARE – Software for the on-line documentation for the quality assurance of study programmes in partner countries.

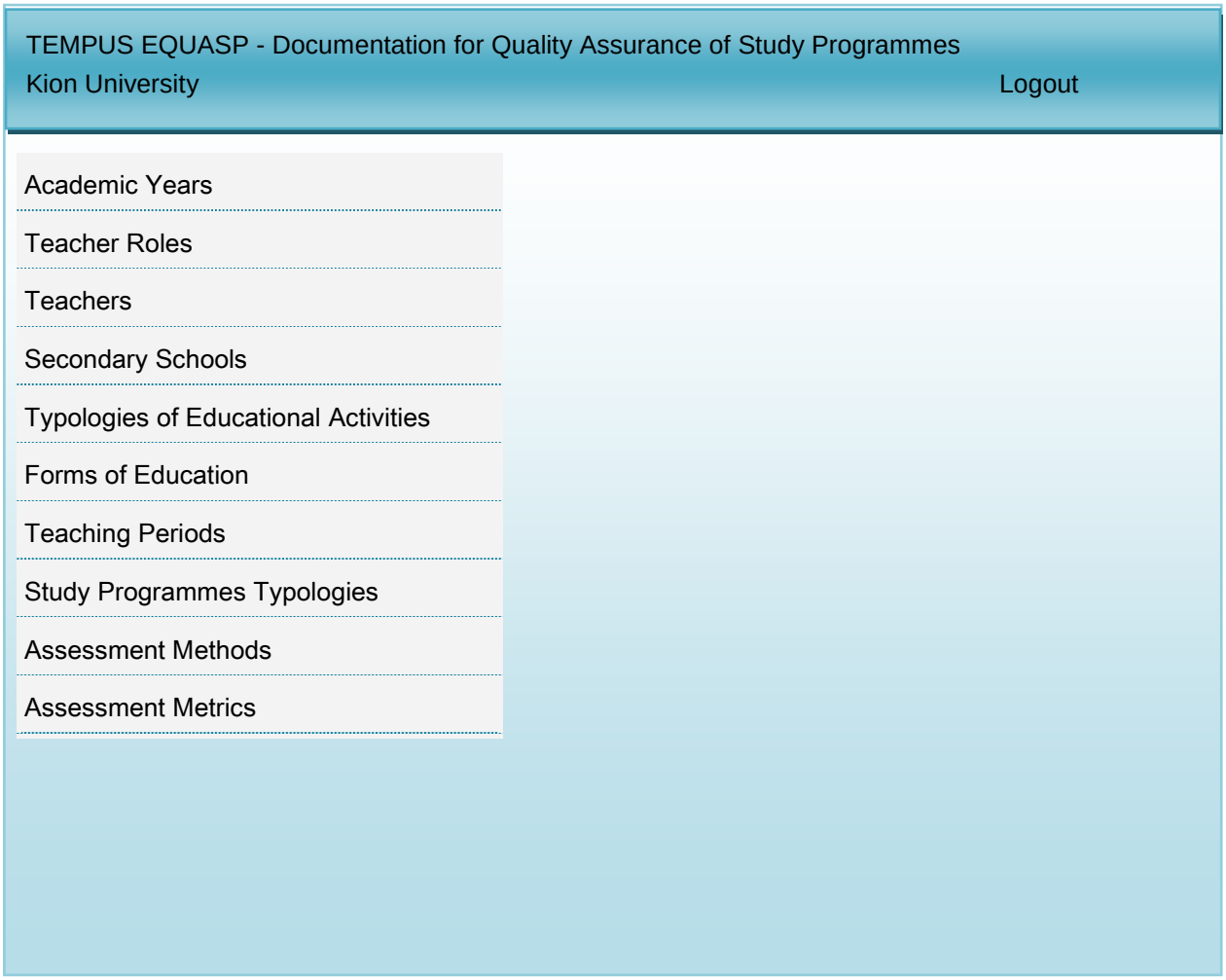
2. ADVANCED FEATURES: DEFINITION OF THE BASIC INFORMATION

These features offer the possibility to describe the 'voices' used in the software, particularly those that regard the definition of the curriculum and the characteristics of the modules.

This is NOT a mandatory activity for the quality assurance of the study programmes. It is only an optional activity that can be used in order to insert into the system a description of the voices used by the software.

This feature is only available to users having the "ROLE_SYSTEM" role.

The menu contains the following functions:



2.1 ACADEMIC YEARS

This function is available only to registered users with "ROLE_SYSTEM" role for the definition and management of the academic years.
The user can insert new academic years, delete academic years (only if not already used by other study programmes), or update the following information on the academic year:

- academic year;
- academic year short description.

Note: Academic years are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

2.2 TEACHER ROLES

This function is available only to registered users with "ROLE_SYSTEM" role for the definition and management of the teacher roles (e.g. lecturer, assistant professor, visiting professor).
The user can insert new teacher roles, delete teachers roles (only if not already referred to other

teachers), or update the following information of the teacher role:

- teacher roles code;
- teacher roles short description;
- teacher roles long description.

Note: Teacher roles are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

2.3 TEACHERS

This function is available only to registered users with “ROLE_SYSTEM” role for the identification and management of the teachers of the selected University.
The user can insert new teachers, delete teachers (only if not already engaged in other didactic activities), or update the following information on the teacher:

- teacher code;
- teacher first name;
- teacher last name;
- teacher role;
- teacher URL.

Note: It is possible to insert a new teacher only if it does not already exist a teacher with the same code for the selected University.

2.4 FORMS OF EDUCATION

This function is available only to registered users with “ROLE_SYSTEM” role for the definition and management of the form of education (e.g.: face to face education, distance education, etc).
The user can insert new teaching methods, delete a teaching method (only if not already associated to other didactic activities), or update the following information of the teaching method:

- teaching method code;
- teaching method short description;
- teaching method long description.

Note: Teaching methods are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

2.5 TEACHING PERIODS

This function is available only to registered users with “ROLE_SYSTEM” role for the definition and management of the teaching periods of the selected University (e.g. semester).
The user can insert new teaching periods, delete teaching periods (only if not already associated to other didactic activities), or update the following information of the teaching period:

- teaching period code;
- teaching period short description;
- teaching period long description.

2.6 STUDY PROGRAMME TYPOLOGIES

This function is available only to registered users with “ROLE_SYSTEM” role for the definition and management of the study programme typologies (e.g. undergraduate, graduate).

The user can insert new study programme typologies, delete study programme typologies (only if not already associated to other study programmes), or update the following information of the study programme typology:

- study programme typology code;
- study programme typology duration;
- study programme short description.

Note: Study programmme typologies are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

2.7 SECONDARY SCHOOLS

This function is available only to registered users with "ROLE_SYSTEM" role for the definition and management of the secondary schools of the Country of the selected University.
The user can insert new secondary schools, delete secondary schools (only if not already present in the monitoring table D1.2_B_3), or update the following information of the secondary school:

- secondary school code;
- secondary school short description;
- secondary school long description.

Note: It is possible to insert a new secondary school only if it does not already exist a secondary school with the same code for the selected University.

2.8 TYPOLOGIES OF EDUCATIONAL ACTIVITY

This function is available only to registered users with "ROLE_SYSTEM" role for the definition and management of the typologies of educational activity (e.g. theoretical lessons, practical lessons, laboratories, projects).
The user can insert new typologies of educational activity, delete typologies of educational activity (only if not already associated to other educational activities), or update the following information of the typology of educational activity:

- typology of educational activity code;
- typology of educational activity short description;
- typology of educational activity long description.

Note: Typologies of educational activity are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

2.9 ASSESSMENT METHODS

This function is available only to registered users with "ROLE_SYSTEM" role for the definition and management of the assessment methods (e.g. oral, written).
The user can insert new assessment methods, delete assessment methods (only if not already associated to other educational activities), or update the following information of the assessment method:

- assessment method code;
- assessment method short description;
- assessment method long description.

Note: Assessment methods are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

2.10 ASSESSMENT METRICS

This function is available only to registered users with “ROLE_SYSTEM” role for the definition and management of the assessment metrics (e.g. grade, judgement).
The user can insert new assessment metric, delete assessment metric (only if not already associated to other educational activities), or update the following information of the assessment metric:

- assessment metric code;
- assessment metric short description;
- assessment metric long description.

Note: Assessment metrics are shared among all the Universities, so their description should not be modified because otherwise the modification will affect all the other Universities.

3. ADVANCED FEATURES: STRUCTURED DESCRIPTION OF THE DIDACTIC UNITS

Regarding the field B2 - Design and planning of the educational process, the system lets the user to define the curriculum and the characteristics of the modules (credits, contents, typologies of educational activities, etc.).

Note: This is NOT a mandatory activity for the quality assurance of the study programmes. It is only an optional activity that can be used for a structured description of the didactic units.

TEMPUS EQUASP - Documentation for Quality Assurance of Study Programmes

Kion University Language English Logout

Code	X025
Short Description	Mathematics 2
Course Year	1
Teaching Period	Second Semester
Theoretical lessons	30 Hours, 6 Credits
Practical lessons	10 Hours, 2 Credits
Credits	8
Teaching method	Face to face
Assessment methods	Written examinations
Assessment metric	Attribution of a final grade
Teachers	John Smith, Theory, 2 credits, 20 hours Marc Cod, Practical lesson, 1 credits, 10 hours
Preparatory didactic units	Mathematics 1
Didactic material of reference	Exercise book
Contents	The course …
Learning outcomes	The course …

4. ADVANCE FEATURES: WEB SERVICE FOR THE MANAGEMENT OF MONITORING TABLES

This feature consists in the insertion into the system of all the information contained in the monitoring tables of area 'D'. This information cannot be inserted via the GUI (graphic user interface), thus EQUASP provides a RESTFUL web service that leads you to retrieve, insert and delete the data about the monitoring tables of area 'D' for a specific study programme.
It is up to you the implementation of the client.

Note: This is NOT a mandatory activity for the quality assurance of the study programmes. It is only an optional activity that can be used in order to insert into the system the information of the monitoring tables.

The web service permits the following three operations:

- get monitoring data: it returns the data contained in the monitoring table;
- insert monitoring data: it inserts the data in the monitoring table;
- delete monitoring data.

4.1 GET MONITORING DATA

The operation returns the data contained in the monitoring table.

Address: `http://EQUASP-test.kion.it/api/stat/get/{uniCod}/{spCod}/{tableName}`

This URL is parametric, composing the parameter you can access to all information needed:

- {uniCod} is the University code, mapped by the table below:

RF01	ASTRAKHAN STATE UNIVERSITY
RF02	DON STATE TECHNICAL UNIVERSITY
RF03	MOSCOW STATE AUTOMOBILE AND ROAD TECHNICAL UNIVERSITY
RF04	MOSCOW STATE UNIVERSITY OF GEODESY AND CARTOGRAPHY
RF05	ST. PETERSBURG STATE POLYTECHNICAL UNIVERSITY
RF06	TAMBOV STATE TECHNICAL UNIVERSITY
RF07	TOMSK POLYTECHNIC UNIVERSITY
RF08	URAL FEDERAL UNIVERSITY n.a. BORIS ELTSIN
RF09	VOLGOGRAD STATE TECHNICAL UNIVERSITY
RF10	VYATKA STATE UNIVERSITY

- {spCod} is the code of the study programme you are interested in;
- {tableName} is the name of the monitoring table:

D1.1_B	Results of the assessment of the mastery of the admission requirements
D1.2_B_1	Bachelor students enrolled at the first course year
D1.2_B_2	Bachelor students enrolled at the first course year subdivided per geographical provenance
D1.2_B_3	Bachelor students enrolled at the first course year subdivided per school of provenance
D1.2_B_4	Bachelor students enrolled at the first course year subdivided per grade of the school leaving examination
D1.2_M_1	Master students enrolled at the first course year
D1.2_M_2	Master students enrolled at the first course year subdivided per geographical provenance
D1.2_M_3	Master students enrolled at the first course year subdivided per first cycle programme of provenance
D1.2_M_4	Master students enrolled at the first course year subdivided per graduation grade
D2.1	Results of the tests for the assessment of the student's learning
D3.1_B	Bachelor enrolments at the different course years
D3.1_M	Master enrolments at the different course years
D3.2_B	Bachelor dropouts
D3.2_M	Master dropouts
D3.3_B	Bachelor credits acquired by the students passing from one course year to the successive one
D3.3_M	Master credits acquired by the students passing from one course year to the successive one
D3.4_B	Bachelor graduates

D3.4_M	Master graduates

An example:
http://127.0.0.1:8888/api/stat/get/AZ01/PROVA-1/D1_2_B_3

This URL returns a JSON object, a response example is:

```
[{
        "rowId":0,
        "row":
        {
                "stuProId":1,
                "shortDes":"Prova",
                "dtIns":1383215205000,
                "stuNum":12314,
                "acadYear":2014,
                "usrIns":"Administrator",
                "schoolId":2,
                "d12B3Id":1
        }
}]
```

4.2 INSERT MONITORING DATA

The operation inserts the data in the monitoring table.

Address: http://127.0.0.1:8888/api/stat/put/{tableName}

The above URL is parametric in table name (see the list of the table names above).
The request must have a JSON payload.
EQUASP provides the Java library containing the pre-built structures, one for each monitoring tables.
The EQUASPWsStruct.jar is available for the download from the EQUASP application.
This inserting function is only for registered users: users authentication is required before calling this URL.

Below there is a sample code to insert one record into the table D1_1_B_1 using Jersey library and Jackson library.

```
import it.kion.EQUASP.ps.gwt.server.service.ws.struct.D12b3;

import java.util.ArrayList;
import java.util.List;

import javax.ws.rs.core.MediaType;

import org.codehaus.jackson.jaxrs.JacksonJsonProvider;

import com.sun.jersey.api.client.Client;
import com.sun.jersey.api.client.ClientHandlerException;
import com.sun.jersey.api.client.ClientRequest;
import com.sun.jersey.api.client.ClientResponse;
import com.sun.jersey.api.client.WebResource;
import com.sun.jersey.api.client.config.ClientConfig;
import com.sun.jersey.api.client.config.DefaultClientConfig;
import com.sun.jersey.api.client.filter.ClientFilter;
import com.sun.jersey.api.representation.Form;

public class TestClass {

	private static Client pClient = null;
	public static Client getClient(){
		if(pClient==null){
			ClientConfig config = new DefaultClientConfig();
			config.getClasses().add(JacksonJsonProvider.class);
			pClient = Client.create(config);
			pClient.setFollowRedirects(false);

			pClient.addFilter(new ClientFilter() {
			    private ArrayList<Object> cookies;
			    @Override
			    public ClientResponse handle(ClientRequest request) throws
ClientHandlerException {
			        if (cookies != null) {
			            request.getHeaders().put("Cookie", cookies);
			        }
			        ClientResponse response = getNext().handle(request);
			        // copy cookies
			        if (response.getCookies() != null) {
			            if (cookies == null) {
			                cookies = new ArrayList<Object>();
			            }
			            // A simple addAll just for illustration (should probably check for
duplicates and expired cookies)
			            cookies.addAll(response.getCookies());
			        }
			        return response;
			    }
			});
		}
		return pClient;
	}

	/**
	 * CLIENT SAMPLE
	 * @param args
	 */
	public static void main(String[] args) {
		TestClass testClass = new TestClass();
		try {
			Client client = TestClass.getClient();
```

```
                        // LOGIN
                        WebResource webResource =
client.resource("http://EQUASP.kion.it/j_spring_security_check");
                        com.sun.jersey.api.representation.Form form = new Form();
                        form.putSingle("j_username", "Administrator");
                        form.putSingle("j_password", "Administrator");
                        form.putSingle("j_domain", "AZ01");
                        ClientResponse resp =
webResource.type(MediaType.APPLICATION_FORM_URLENCODED_TYPE).post(ClientResponse.class, form);
                        resp.getStatus();

//                       REQUEST
                        testClass.insertRecord(client);

                } catch (Exception e) {
                        e.printStackTrace();
                }
        }

        private void insertRecord(Client client) {
                WebResource webResource;
                webResource = client.resource("http://EQUASP.kion.it/api/stat/put/D1_2_B_3/");
                D12b3 s = new D12b3();
                s.setSpCod("PROVA-1");
                s.setSchoolCod("aaa1");
                s.setLangDes("eng");
                s.setSchoolDes("WEB SERVICE: scuola di prova");
                s.setStuNum(121L);
                s.setYear(2014L);
                ClientResponse response = webResource.entity(s,
MediaType.APPLICATION_JSON_TYPE).post(ClientResponse.class);
                System.out.println("Output from Server ....");
                System.out.println("Response: "+response.getStatus());// Status 200 o 201
                System.out.println("Data Count: "+response.getEntity(String.class));
        }

}
```

4.3 DELETE MONITORING DATA

The operation deletes one record from the monitoring tables.

Address: http://127.0.0.1:8888/api/stat/put/rem/{tableName}/{id}/

The URL is parametric in table name (see the list of the table names above) and in ID (which is a unique identifier) of the record in the table.

This example shows how to delete the record with ID=5 from table D1.1_B.

```
        private void deleteRecordTable(Client client){
                WebResource webResource =
client.resource("http://EQUASP.kion.it/api/stat/rem/D1_1_B_1/5");
                ClientResponse response = webResource.delete(ClientResponse.class);
                if (response.getStatus() != 200) {
                        throw new RuntimeException("Failed : HTTP error code : " + response.getStatus());
                }
                String output = response.getEntity(String.class);
                System.out.println("Output from Server ....");
                System.out.println(output);
```

```
}
```

5. ANNEX: DESCRIPTION OF THE MONITORING TABLES

The following pages describe the statistic tables:

D1.1_B – Results of the assessment of the possession of the admission requirements

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students with an admission grade between … and …			
…			

D1.2_B_1 – Bachelor students enrolled in the first course year

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
New enrollments			
…			

D1.2_B_2 - Bachelor students enrolled in the first course year subdivided per geographical provenance

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
Residents in the same town			
Residents in the same region			
…			

D1.2_B_3 - Students enrolled in the first course year subdivided per school of provenance

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
School 1			
…			

D1.2_B_4 – Bachelor students enrolled in the first course year subdivided per grade of the school-leaving examination

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students with grade of the school-leaving examination between … and …			
…			

D1.2_M_1 – Master students enrolled in the first course year

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
New enrolments			
…			

D1.2_M_2 - Master students enrolled in the first course year subdivided per geographical provenance

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
Residents in the same town			
Residents in the same region			
…			

D1.2_M_3 - Master students enrolled in the first course year subdivided per first cycle programme of provenance

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
Study Programme 1			
…			

D1.2_M_4 – Master students enrolled in the first course year subdivided per graduation grade

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students with graduation grade between … and …			
…			

D2– Results of the tests for the assessment of the students' learning

	a.y. xx-3/xx-2				a.y. xx-2/xx-1				a.y. xx-1/xx			
	N. of students	**N.** of students who have **overcome the exam**	**Average grade**	**Variation**	**N. of students**	**N.** of students who have **overcome the exam**	**Average grade**	**Variation**	**N. of students**	**N.** of students who have **overcome the exam**	**Average grade**	**Variation**
Course unit 1												
…												

D3.1_B – Enrolments of bachelor students in the different course years

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students enrolled in the 1st course year			
Students enrolled in the 2nd course year holding to the reference cohort			
Total number of students enrolled in the 2nd course year			
Students enrolled in the 3rd course year holding to the reference cohort			
Total number of students enrolled in the 3rd course year			
Students enrolled in the 4th course year holding to the reference cohort			
Total number of students enrolled in the 4th course year			
Out-of-course students holding to the reference cohort			
Total number of out-of-course students			

D3.1_M – Enrolments of master students in the different course years

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students enrolled in the 1st course year			
Students enrolled in the 2nd course year holding to the reference cohort			
Total number of students enrolled in the 2nd course year			
Out-of-course students** holding to the reference cohort			
Total number of out-of-course students			

D3.2_B – Dropouts of bachelor students

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
Dropouts between the 1st and 2nd course year			
…			
Dropouts between the 2nd and 3rd course year			
…			
Dropouts between the 3rd and 4th course year			
…			

D3.2_M – Dropouts of master students

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
Dropouts between the 1st and 2nd course year			
…			

D3.3_B – Credits acquired by bachelor students passing from one course year to the successive one

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students enrolled in the 2nd course year holding to the reference cohort			
Median of the credits acquired by the students enrolled in the 2nd course year holding at the reference cohort			
Average value of the credits acquired by the students enrolled in the 2nd course year holding to the reference cohort			
Variation of the credits acquired by the students enrolled in the 2nd course year holding to the reference cohort			
N. of students enrolled in the 3rd course year holding to the reference cohort			
Median of the credits acquired by the students enrolled in the 3rd course year holding at the reference cohort			
Average value of the credits acquired by the students enrolled in the 3rd course year holding to the reference cohort			
Variation of the credits acquired by the students enrolled in the 3rd course year holding to the reference cohort			

(the table continues in the next page)

A001 - Biological Engeneering

D - RESULTS

N. of students enrolled in the 4th course year holding to the reference cohort			
Median of the credits acquired by the students enrolled in the 4th course year holding at the reference cohort			
Average value of the credits acquired by the students enrolled in the 3rd course year holding to the reference cohort			
Variation of the credits acquired by the students enrolled in the 4th course year holding to the reference cohort			
N. of students out-of-course students holding to the reference cohort			
Median of the credits acquired by the out-of-course students holding to the reference cohort			
Average value of the credits acquired by the out-of-course students holding to the reference cohort			
Variation off the credits acquired by the out-of-course students holding to the reference cohort			

D3.3_M – Credits acquired by master students passing from one course year to the successive one

	a.y. xx-3/xx-2	**a.y. xx-2/xx-1**	**a.y. xx-1/xx**
N. of students enrolled in the 2nd course year holding to the reference cohort			
Median of the credits acquired by the students enrolled in the 2nd course year holding at the reference cohort			
Average value of the credits acquired by the students enrolled in the 2nd course year holding to the reference cohort			
Variation of the credits acquired by the students enrolled in the 2nd course year holding to the reference cohort			
N. of students out-of-course students holding to the reference cohort			
Median of the credits acquired by the out-of-course students holding to the reference cohort			
Average value of the credits acquired by the out-of-course students holding to the reference cohort			
Variation of the credits acquired by the out-of-course students holding to the reference cohort			

D3.4_B – Bachelor graduates

	a.y. xx-3/xx-2	a.y. xx-2/xx-1	a.y. xx-1/xx
Graduates holding to the cohort of a.y. xx-3/xx-2			
Graduates holding to the cohort of a.y. xx-4/xx-3			
…			

D3.4_M – Master graduates

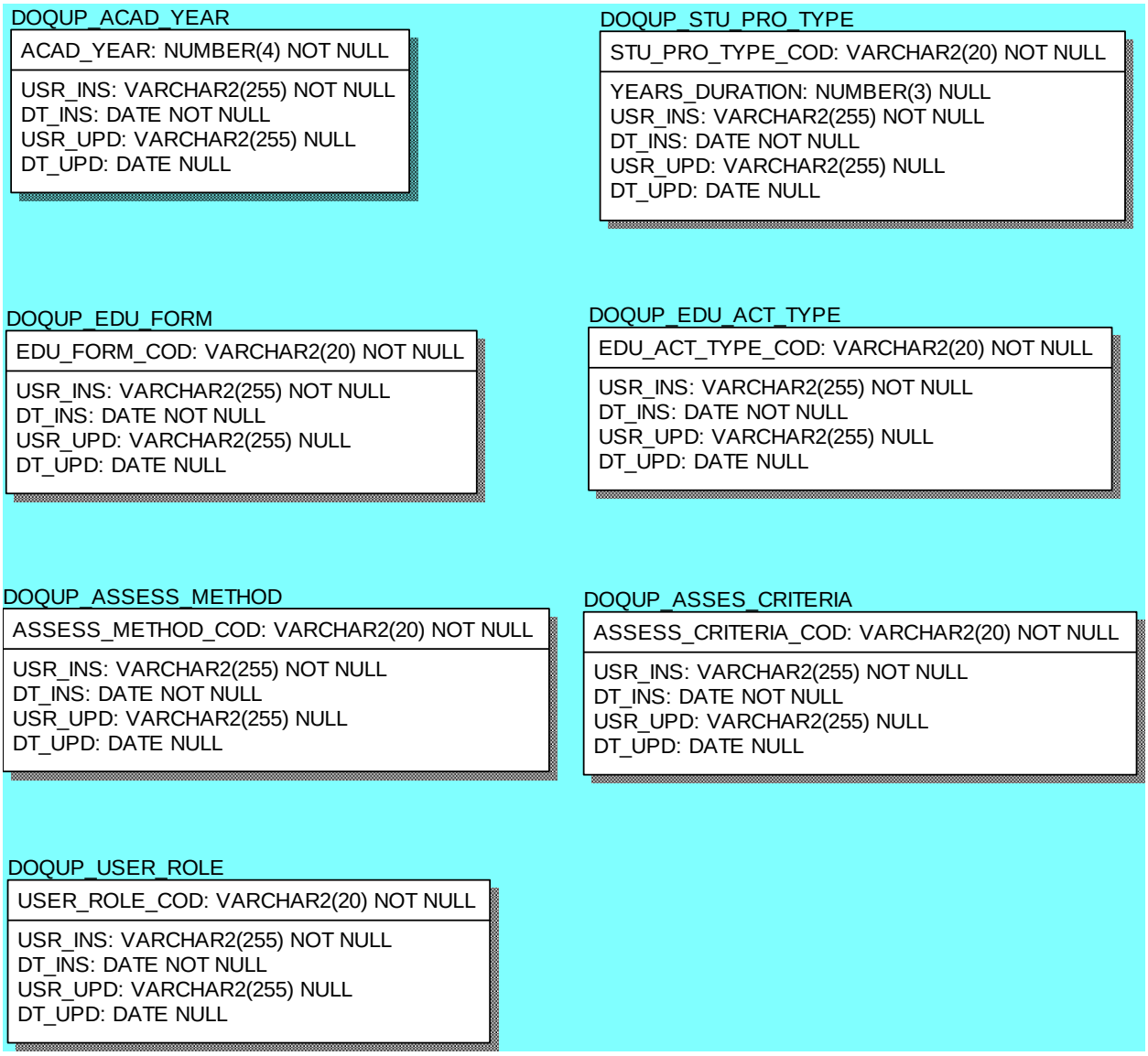
	a.y. xx-3/xx-2	a.y. xx-2/xx-1	a.y. xx-1/xx
Graduates holding to the cohort of a.y. xx-2/xx-1			
Graduates holding to the cohort of a.y. xx-3/xx-2			
…			

6. ANNEX: DATA MODELING

This section describes the main entities involved in the documentation for quality assurance of study programmes.

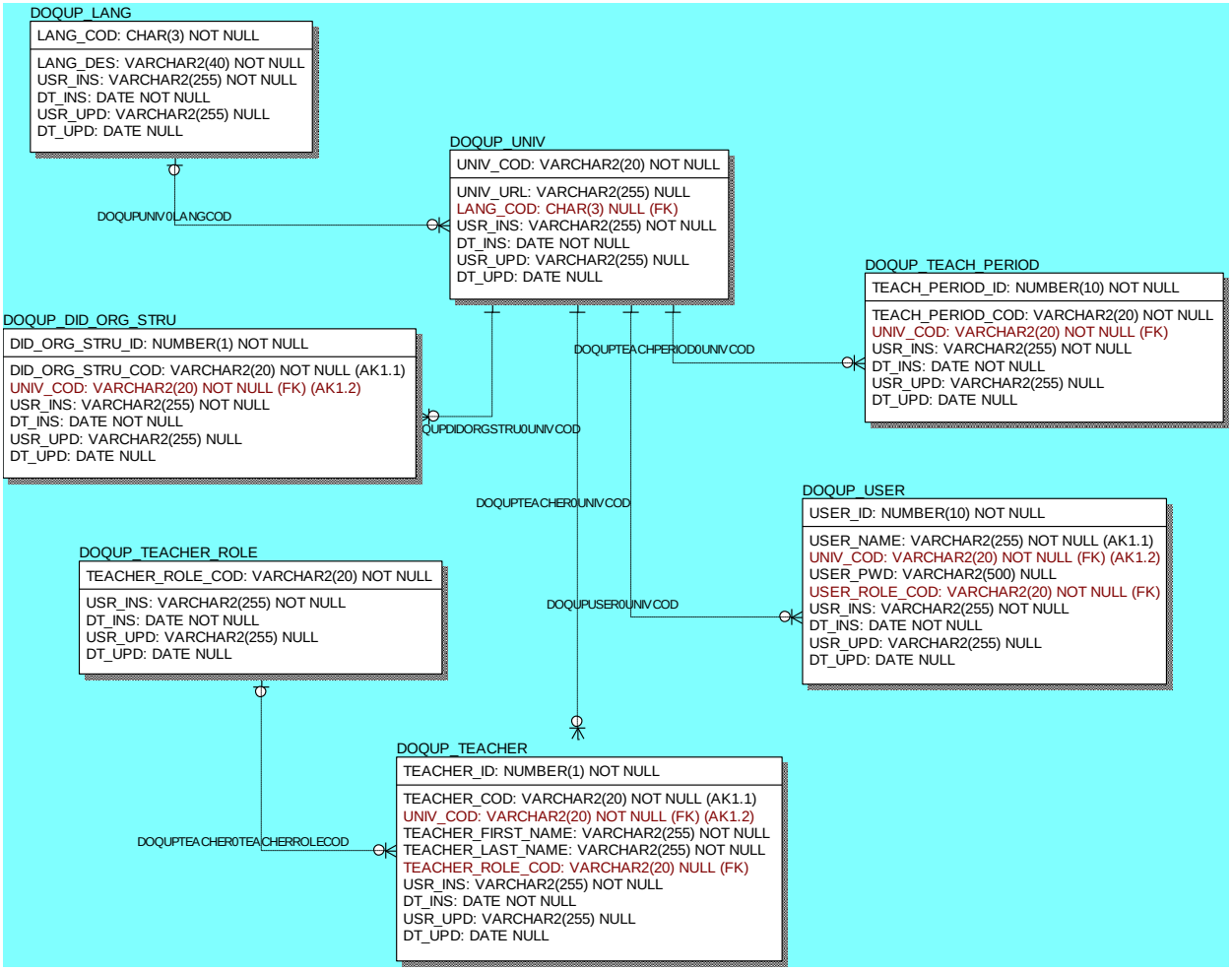
6.1 BASIC TABLES

Basic tables independent by the University:



Note that the descriptions of the data are not included in the tables but are managed in only one specific description table.

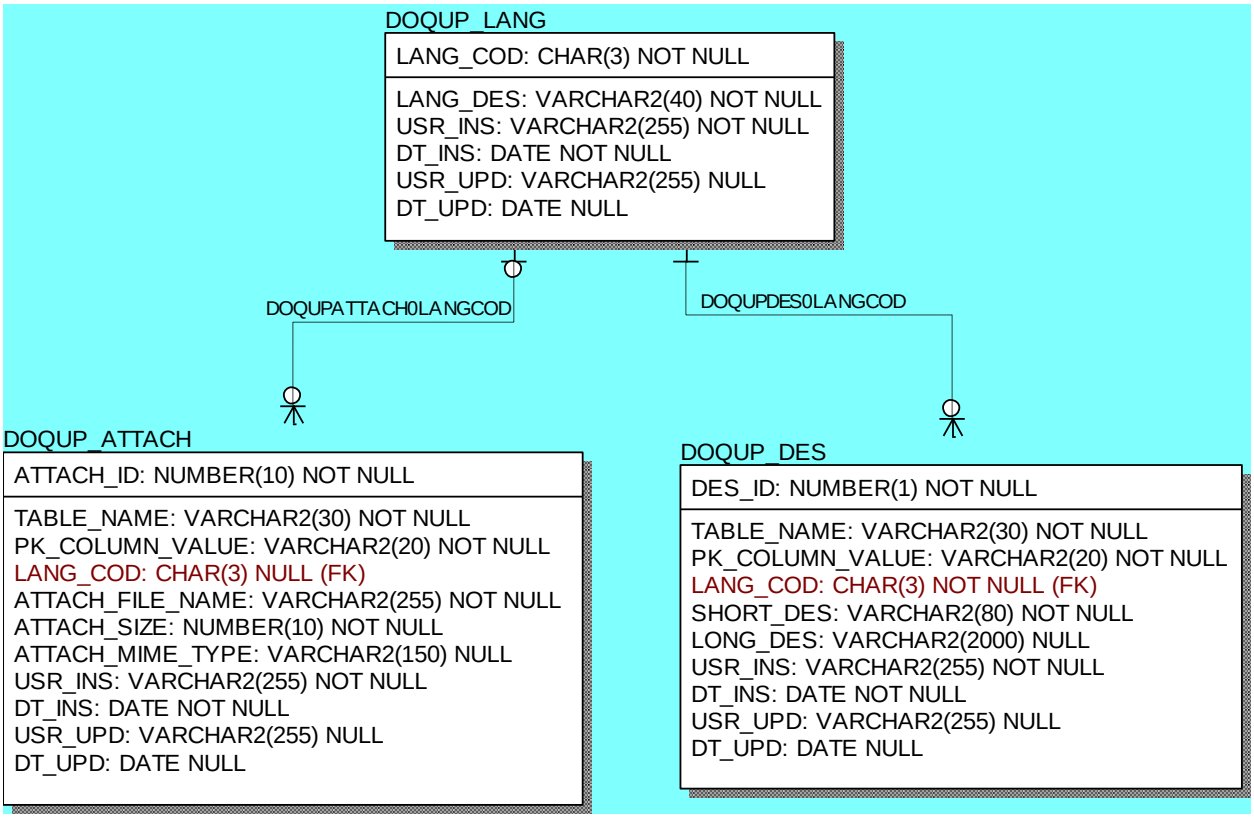
Basic tables depending by the University:



Note that the descriptions of the data are not included in the table but are managed in only one specific descriptions table.

6.2 DESCRIPTIONS AND ATTACHMENTS

The multi-language descriptions and attachments of all the data are stored in only one centralized entity. The unique key of the table, that uniquely identifies a description/attachment, is the tuple: language code, table name, Primary key Column Value.
Every record has a short description (up to 80 characters) and, optionally, a long description (up to 2000 characters).



6.3 STANDARDS, REQUIREMENTS AND DOCUMENTATION

These entities contain the standards for the quality assurance and the associated quality requirements:

A - Needs and Objectives
- A1 - Educational needs of the labour market
- A2 - Educational objectives
- A3 - Learning outcomes

B - Educational process
- B1 - Admission qualifications and requirements
- B2 - Design and planning of the educational process
- B3 - Realization of the educational process

C - Resources

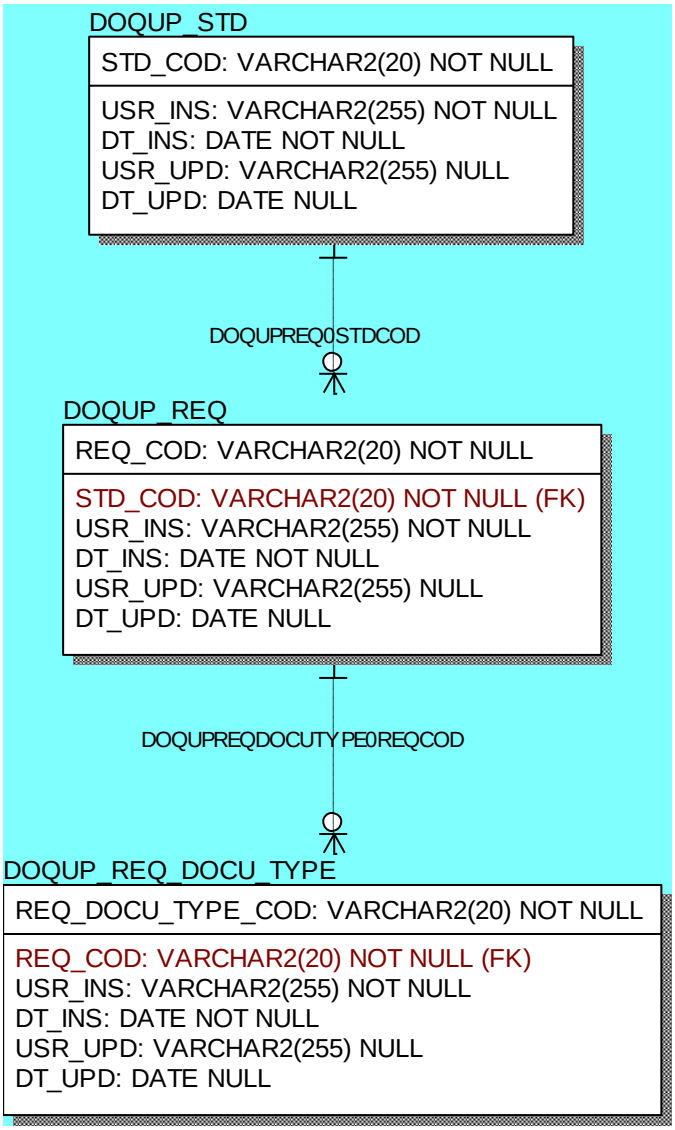
- C1 - Teaching staff
- C2 - Facilities
- C3 - Financial resources *(optional)*
- C4 - Student support services
- C5 - Partnerships

D – Monitoring and Results

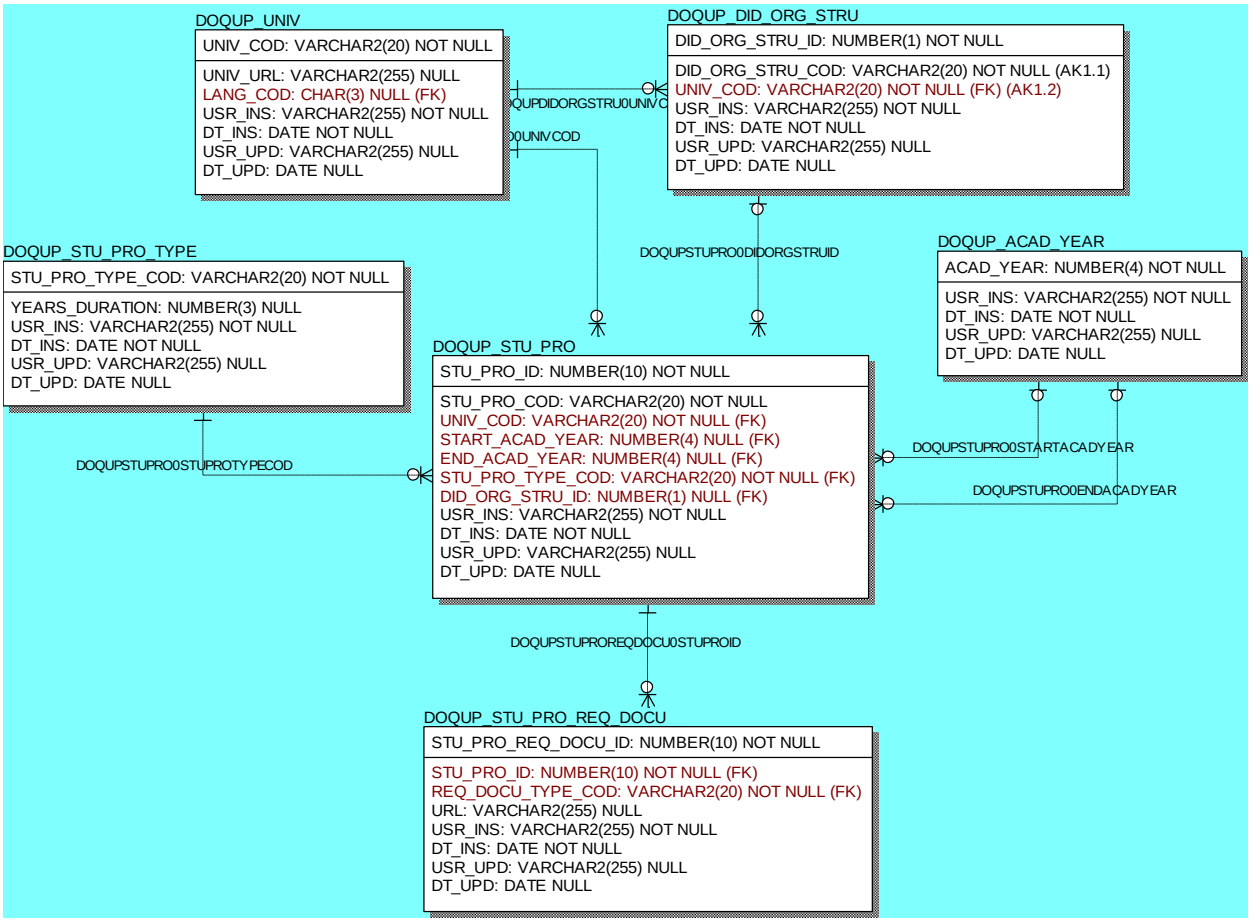
- D1 - Entrance students
- D2 - Students' learning
- D3 - Students' progression in their studies
- D4 - Students' opinions on the educational process
- D5 - Graduates' placement

E - Management system for quality

- E1 - Policy and organization for quality assurance
- E2 - Management system for quality
- E3 - Revision
- E4 - Publicity of information


DOQUP_STD
STD_COD: VARCHAR2(20) NOT NULL
USR_INS: VARCHAR2(255) NOT NULL
DT_INS: DATE NOT NULL
USR_UPD: VARCHAR2(255) NULL
DT_UPD: DATE NULL
DOQUPREQ0STDCOD
DOQUP_REQ
REQ_COD: VARCHAR2(20) NOT NULL
STD_COD: VARCHAR2(20) NOT NULL (FK)
USR_INS: VARCHAR2(255) NOT NULL
DT_INS: DATE NOT NULL
USR_UPD: VARCHAR2(255) NULL
DT_UPD: DATE NULL
DOQUPREQDOCUTYPE0REQCOD
DOQUP_REQ_DOCU_TYPE
REQ_DOCU_TYPE_COD: VARCHAR2(20) NOT NULL
REQ_COD: VARCHAR2(20) NOT NULL (FK)
USR_INS: VARCHAR2(255) NOT NULL
DT_INS: DATE NOT NULL
USR_UPD: VARCHAR2(255) NULL
DT_UPD: DATE NULL

6.4 STUDY PROGRAMMES



6.5 CURRICULUM