

# Assessment report

of the

**Joint study programme “*Graduate Study Programme in Computer Science – Internet of Things and Artificial Intelligence*”**

offered by

- Algebra University College / Zagreb, Croatia and
- Ecole pour l'informatique et les nouvelles technologies (EPITECH) /Paris, France

Review coordinated by Agency for Science and Higher Education (ASHE) following the European Approach on Quality Assurance for Joint Programmes



agency for science and higher education croatia

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# Glossary

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Algebra	Algebra University College
ASHE	Agency for Science and Higher Education
EQF	European Qualifications Framework
EPITECH	Ecole pour l'informatique et les nouvelles technologies
ImpEA	Erasmus+ Strategic Partnership Project "Facilitating Implementation of the European Approach for the Quality Assurance of Joint Programmes"

# 1. General information

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## 1.1. BASIC INFORMATION ABOUT THE PROCEDURE

*Please provide general overview of the principles of the procedure, including short overview of the joint programme under assessment.*

This report is produced by the panel appointed by the ASHE with the aim of carrying out the initial accreditation process of a joint programme "Graduate Study Programme in Computer Science – Internet of Things and Artificial Intelligence" based on the [procedural principles](#) and [standards](#) of the European Approach, as explained in detail under the framework of the [ImpEA project](#).

The joint programme has been developed by the Croatian-French consortium consisting of *Algebra University College* from Zagreb, Croatia and *Ecole pour l'informatique et les nouvelles technologies* (EPITECH) from Paris, France.

The *Graduate Study Programme in Computer Science - Internet of Things and Artificial Intelligence* is created for students who would like to attain skills necessary to work with advanced technological systems in many IoT and AI areas: home automation, environment, healthcare, smart city, smart agriculture, data empowered products and services, AI enabled assistant services and similar applications.

The aim of this programme is to build all skills required for understanding IoT and AI, including data science and full-stack IoT developer roles - from designing and implementing smart solutions to data analytics and hardware management, especially devices with sensors and actuators, communication protocols all the way to Cloud-based backend APIs and data/big data storages.

The *Graduate Study Programme in Computer Science – Internet of Things and Artificial Intelligence* is offered as a full-time two-year programme at EQF level 7 with 120 ECTS credits.

The initial accreditation of this joint programme was initiated by a request received in February 2021. A self-evaluation report was submitted jointly by both partner institutions in February 2021.

The initial accreditation of this joint programme was organized on-line, including, partially, for the preliminary site-visit. Croatian panel members went to the preliminary site-visit at Algebra on 15<sup>th</sup> of March 2021 during which they had a tour of the work facilities, classrooms, library, student administration office etc. and attended sample lectures, where they had a

brief Q&A session with students. On-line meetings of all panel members were organized on 16<sup>th</sup> and 17<sup>th</sup> of March 2021. Prior to the site visit, ASHE organised a training session for the panel experts on 8<sup>th</sup> of March 2021.

On the basis of very extensive documentation including the self-assessment report, the Consortium Agreement and other evidence provided by both institutions prior to and during the site visit, as well as on the basis of the information gathered through conversations with stakeholders during preliminary site visit and the on-line site-visit meetings, the panel gained a comprehensive insight into the development, content and plan for delivery of the proposed joint study programme.

On the basis of the standards of the *European Approach for Quality Assurance of Joint Programmes* the panel assesses the overall quality of the programme as positive and recommends the study programme to be accredited.

## **1.2. PANEL OF EXPERTS**

*Please provide short information about the procedure for selection and nomination of the expert panel, the list of experts, their affiliation and role in the panel.*

The ASHE's Accreditation Council appointed an independent panel of experts for conducting the accreditation of the Joint graduate study programme developed jointly by the consortium consisting of *Algebra University College* and *Ecole pour l'informatique et les nouvelles technologies* (EPITECH) in February 2021.

In the sourcing of the experts, the ASHE has been guided by the principles for setting up a panel of experts as described within the IMPEA project. The panel consists of five experts, including a student member, who combine expertise in the relevant subject disciplines, knowledge of labour market needs, as well as experience in quality assurance processes in higher education. The panel members have extensive international experience, as well as knowledge of the HE systems of both countries represented in the consortium, as three panel members are coming from Croatia and France.

Both HEIs in the consortium approved the panel composition. French national agency, Hcéres was informed of the initiation of this accreditation procedure and the panel composition and has been asked for its input and cooperation in making a proper judgement of EPITECH's compliance with the first European Approach Standard – Eligibility.

The ASHE organized a briefing of the panel experts on the review procedure, their specific roles and the understanding of European Standards as explained within IMPEA project.

The coordinators of this accreditation process from the ASHE are:

- Mina Đorđević, Head of International Cooperation Department
- Sandra Bezjak, Assistant Director for Higher Education

The panel of experts has been composed of the following members:

- prof. em. dr. ir. Elie Milgrom, Louvain School of Engineering, Université catholique de Louvain, Kingdom of Belgium - Chair
- asst. prof. dr. sc. Aurélien Francillon, Graduate school and Research Centre in Digital Sciences (EURECOM), Republic of France – panel member
- prof. Michail Giannakos, Ph.D., Faculty of Information Technology and Electrical Engineering, Norwegian University of Science and Technology, Kingdom of Norway – panel member
- assoc. prof. dr. sc. Emmanuel Karlo Nyarko, Faculty of Electrical Engineering, Computer Science and Information Technology, Josip Juraj Strossmayer University of Osijek, Republic of Croatia – panel member
- Dino Aljević, University of Rijeka, Republic of Croatia, student.

### **1.3. CAVEATS**

The Panel wishes to stress that a first accreditation is less evidence-based than re-accreditation: since the programme doesn't exist yet, there is much less factual evidence and there are many more statements of intent.

Usually, when assessing statements of intent, the Panel relies on extrapolation from current existing programmes and practices, and possibly from previous quality assessments of existing programmes. This is harder for joint programmes, since both institutions have different backgrounds, different cultures, different practices, and different experiences with external quality assessment of study programmes. The Panel needs to decide what to extrapolate from to reach conclusions pertaining to the new programme.

Whenever possible, this Panel's assessments are based on documentary evidence provided by the partner institutions and on answers provided during interviews; some will be based on the panel's own assessment of the credibility of the consortium's statements of intent.

## 2. Eligibility

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### 2.1. STATUS

*The institutions that offer a joint programme should be recognised as higher education institutions by the relevant authorities of their countries. Their respective national legal frameworks should enable them to participate in the joint programme and, if applicable, to award a joint degree. The institutions awarding the degree(s) should ensure that the degree(s) belong to the higher education degree systems of the countries in which they are based.*

#### **Evidence:**

- Self-evaluation report (SER)
- SER Annex 1 – Legal Status of Algebra
- SER Annex 2 – Legal Status of EPITECH
- Annex 4 – Institutional re-accreditation of Algebra
- SER Annex 8 - ELABORAT on Joint Study Programme
- Additional information provided on request of the Panel: Annex 1 – Teachers Data

#### **Analysis:**

The Panel has examined the information made available by the consortium's partners and it has arrived to the following conclusions regarding this criterion.

ALGEBRA is an accredited higher education institute in the Republic of Croatia, listed in the public Register of Accredited Study Programmes in the Republic of Croatia kept by the Ministry of Science and Education, Croatia.

The teacher-student ratio for ALGEBRA is 1:28.8, which is better than 1:30. Coverage of the study programme with own staff is 66%, which is greater than 1/3.

The current number of students in ALGEBRA is 1427; assuming 50 students per year in the Joint Study Programme results in a total of 1527 students. ALGEBRA has a total space of 3990.38 m<sup>2</sup>. This results in 2.61 m<sup>2</sup>/student which is higher than the required 1.25 m<sup>2</sup>/student.

The number of compulsory literature items for a particular course is at least 120% of the number of enrolled students at ALGEBRA.

EPITECH is "recognized by the State" in France since 2009.

EPITECH will award an already existing "titre RNCP" ("*Expert(e) en technologies de l'information*") which is at EQF level 7. It is not clear to the Panel what "*belong to the higher education degree systems of the countries in which they are based*" means. In the case of EPITECH, the degree awarded is a "*diplôme d'établissement*" which is not automatically recognized by other institutions (it doesn't provide any automatic equivalence). It is not a Master's degree ("*Grade de Master*") or equivalent to a Master's degree.

Due to the curriculum at EPITECH, a number of students are doing internship in companies off-campus. This results in 6 m<sup>2</sup>/student, which is higher than the required 1.25 m<sup>2</sup>/student. This statement by EPITECH was not corroborated by other data.

**Assessment:**

Since assessing this criterion requires deep understanding of the intricacies of national higher education degree systems and quality assessment processes, the Panel has asked ASHE to provide this part of the assessment.

In view of the evidence submitted by the French *Ministry of Higher Education, Research and Innovation* and collected through the Hcéres, and the evidence collected from *France Education International*, as well as taking into account clarifications provided by abovementioned institutions, the ASHE states that:

1. EPITECH is a French private higher education institution which has been recognized by the French State since 2009 (cf. Annex 2). This kind of recognition means that the institution belongs to the French Higher Education system.
2. A) EPITECH awards qualifications, which are currently recognized and registered in the French *National register of professional qualifications* ("*Répertoire national des certifications professionnelles*" - RNCP) and managed by *France Compétences* (*National Qualification Framework* - NQF). The EPITECH qualifications currently registered in the RNCP are at the level EQF 5, EQF 6 and EQF 7.  
  
B) The ASHE has been informed that qualifications awarded by EPITECH at EQF 7 are not so-called State or national degrees («Diplôme national» of a Master level), which are quality-assured by relevant quality assurance body and for which the State is responsible. Qualifications awarded by EPITECH at EQF 7 correspond to a professional qualification at Level 7 for which the awarding HEI is solely responsible. The ASHE has learned that this is a specificity of the French higher education system and is of opinion that this specific characteristics / provisions of the higher education system in France should be taken into consideration.
3. EPITECH may take part in Erasmus mobility exchanges as the RNCP reference is sufficient for a HEI to be eligible to sign the Erasmus Charter for Higher Education (ECHE), as well may be a partner HEI in joint study programmes.

**Assessment:**

This criterion is fully satisfied.

**Recommendations:**

- The Panel recommends that EPITECH should aim at obtaining a true Master's level degree/title ("*Grade de Master*") for the joint programme in the future as this would be very valuable for the students.

## **2.2. JOINT DESIGN AND DELIVERY**

*The joint programme should be offered jointly, involving all cooperating institutions in the design and delivery of the programme.*

### **Evidence:**

- Self-evaluation report (SER)
- Cooperation agreement
- Excel file "Teachers Data"
- Composition of the Commission, committees, boards + flow of reporting between the bodies
- Interviews with the Deans and with the various bodies: Academic Commission, committees, boards

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. It has arrived to the conclusion that the joint programme is truly offered jointly, involving both cooperating institutions in the design and delivery of the programme.

The Panel also appreciates that a top-down approach was used in designing the joint programme.

### ***Strong points of the proposal:***

- A very strong commitment of both institutions to the joint programme.
- The programme was designed over 3 years by the Joint Programme Committee with balanced representation of both institutions.
- The programme clearly builds upon the strengths of each institution
- Every programme management body is composed of representatives of both institutions, with similar levels of authority and responsibilities.
- Each institution is familiar with the other one thanks, among others, to existing student exchange programmes.
- Students will spend one year in each institution.

### ***Points of improvement / areas for further development:***

- When several teachers are implicated in a single course, they currently belong to the same institution.
- The processes relating to the interactions of the Joint programme Academic Commission with the authorities (e.g., Deans) of each institution needs clarifying.
- The decision-making process in case of disagreement between partners also needs clarifying.

### **Assessment:**

This criterion is fully satisfied.

**Recommendations:**

- The programme is the result of an ongoing design process. Ensure that the design process and the design choices of the programme and of each individual course is documented and available to concerned parties.
- Ensure that each partner brings its own strengths to the consortium and accepts to build upon the other partner's strengths, even if this means a possibly painful change of culture and/or practice.
- Try to involve teachers of both institutions in as many courses as possible, not necessarily in the teaching itself but, for instance: in the peer reviewing of material, of methods, of examples, of project assignments, of assessments.
- Ensure that the day-to-day management of the joint programme is reactive enough to handle unforeseen issues very quickly.
- Avoid the pitfall of considering each study year to be mostly the responsibility of the institution where the study takes place: both partner institutions should be fully involved in both study years.

## **2.3. COOPERATION AGREEMENT**

*The terms and conditions of the joint programme should be laid down in a cooperation agreement. The agreement should in particular cover the following issues:*

- *Denomination of the degree(s) awarded in the programme*
- *Coordination and responsibilities of the partners involved regarding management and financial organisation (including funding, sharing of costs and income etc.)*
- *Admission and selection procedures for students*
- *Mobility of students and teachers*
- *Examination regulations, student assessment methods, recognition of credits and degree awarding procedures in the consortium.*

### **Evidence:**

- Cooperation Agreement
- Interviews with Deans and with the Academic Commission

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. It finds that the Cooperation Agreement between the consortium's partners covers all relevant aspects of their cooperation in the joint programme. Some aspects (examination regulations, assessment methods, admission process) are treated in other, more specific documents referred to in the Cooperation Agreement.

### ***Strong points of the proposal:***

- The cooperation agreement is extensive, detailed and it covers all relevant aspects of the cooperation between the partners.
- Degrees awarded are clearly identified; EPITECH will award a degree with the existing title ("Expert in Information Technology") for the joint programme; ALGEBRA will create a new degree ("Professional Specialist of Internet of things and Artificial Intelligence").
- Students will study during one year at each institution.

### ***Points of improvement / areas for further development:***

- No provision is made for the mobility of teachers.
- Additional mobility may be possible for students, but the conditions and limitations are not clearly stated.
- The title of the degree which will be awarded by EPITECH fails to indicate the specific contents of the joint programme.

### **Assessment:**

This criterion is fully satisfied.

### **Recommendations:**

- Encourage the mobility of teachers between both partners.
- Clarify the conditions for additional student mobility.

# 3. Learning Outcomes

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## 3.1. LEVEL

*The intended learning outcomes should align with the corresponding level in the Framework for Qualifications in the European Higher Education Area (FQ-EHEA), as well as the applicable national qualifications framework(s).*

### **Evidence:**

- Self-evaluation report (SER)
- Excel file "Matrix of alignment with level"
- Additional information provided on request of the Panel: "Determining the level of ILOs"
- Interview with the Joint Programme Committee

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. The Panel finds that, for every course ILO, the matrix provided by the consortium indicates its EQF/FQ-EHEA level, 68% of which are stated to be at Level 7, the other ones being classified at levels 6 or 5. Additional information provided the reasoning used to justify the levels, with reference to 4 domains: knowledge, skills, autonomy, and responsibility.

The Panel finds that the provided evidence shows that the programme conforms to the requirements of EQF/FQ-EHEA Level 7 for professional studies.

### ***Strong points of the proposal:***

- The intended programme learning outcomes (ILOs) are aligned with the respective national qualifications framework of higher education system of each awarding degree partner.

### ***Points of improvement / areas for further development:***

- It is still somewhat unclear how each course has been categorized in the different levels. A detailed justification of the EQF/FQ-EHEA level of every course is needed.
- It is not clear enough how the programme ILOs are achieved internally in the courses.

### **Assessment:**

This criterion is fully satisfied.

### **Recommendations:**

- Maintain and publish a document justifying the FQ-EHEA level of every course and make it available to the teachers as input for their teaching methods and activities.
- Produce a more fine-grained relationship between the programme ILOs, the courses and the FQ-EHEA level (not merely getting the numbers from the default matrices).

### **3.2. DISCIPLINARY FIELD(S)**

*The intended learning outcomes should comprise knowledge, skills, and competencies in the respective disciplinary field(s).*

*Intended learning outcomes of a joint programme should indicate its added value coming from the joint delivery mode. [...]*

*[...] the intended learning outcomes should be formulated in a way that enables assessment and verifications of its achievement in the course of the programme.*

#### **Evidence:**

- Self-evaluation report (SER)
- Annex 7 – Course descriptions
- Interview with Joint Programme Committee

#### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. The Panel finds that the programme intended learning outcomes (ILOs) and the course ILOs relate to knowledge, skills, and competencies and that both partners provide their own clearly useful contributions to the joint programme's ILOs. The added value arising from the joint delivery mode is thus evident.

#### ***Strong points of the proposal:***

- Course ILOs are expressed with explicit reference to Bloom's taxonomy in the cognitive domain.
- The ILOs play a central role in the design of the programme and its courses.
- The ILOs include knowledge, skills, and competencies in AI and IoT.
- There is no doubt that the program is of interest and will benefit both institutions.
- The set of the joint programme's ILOs is a joint decision of the consortium (through the Joint Programme Committee).

#### ***Points of improvement / areas for further development:***

- The ILOs should be formulated in a way that enables assessment and verification of their achievement in the course of the programme; this is not quite achieved with the current formulation of the programme ILOs and some of the course ILOs, which are still too imprecise.
- There is no mention of ILOs in domains other than the cognitive domain: psychomotor, socio-affective (relational), and metacognitive ILOs are absent.
- "Soft skills" are not visible enough in the Programme ILOs and in the course ILOs: foreign languages, intercultural skills, communication, team work, critical thinking, ethics, professional behaviour, etc. are conspicuously absent. They are sometimes mentioned as extra or on the side objectives, but without explicit course ILOs, making it impossible to assess those skills since assessments are aligned with course ILOs.

- Absence of ILOs indicating awareness of theoretical or experimental results in the various fields covered by the programme (e.g., algorithm complexity).
- Entrepreneurial skills are not explicitly present in the programme's 17 ILOs, but they are referenced in the SER on multiple occasions. The SER explicitly states teaching such skills is a "very important programme objective".
- The "added value" of having a joint programme it is not made sufficiently clear (besides of the obvious added value of having a joint programme). What are the learning outcomes that would be difficult to achieve by each of the partners alone?
- Table on p. 40 of the SER (contributions of courses to programme ILOs) shows a strong emphasis on programming (programme ILO 7) and few contributions to programme ILOs 12, 16 and 17.

**Assessment:**

This criterion is partially satisfied.

**Recommendations:**

- Decompose the (rather general) programme ILOs into operational (assessable) ILOs and show how the course ILOs contribute to these operational ILOs.
- Ensure that all course ILOs are truly assessable and self-assessable.
- In order to prepare students for life-long learning, include occasions devoted to reflecting about one's learning and methods to improve one's learning ("metacognition", reflexivity).
- Include "soft skill" ILOs (and learning activities) in various courses of the programme; make these ILOs explicit at course and programme level.
- Make sure that students are aware of theoretical or experimental results in the various fields covered by the programme and that they know how to find and how to use them.
- The institutions need to work further in order to demonstrate (provide evidence) on how the unique set of programme's learning aims, objectives and ILOs benefit (added value) from a joint offering.

### **3.3. ACHIEVEMENT**

*The programme should be able to demonstrate that the intended learning outcomes are achieved.*

#### **Evidence:**

- Self-evaluation report (SER)
- Additional evidence provided after request by the Panel
- Interview with the Joint Programme Committee
- Interview with the Examination Board

#### **Analysis:**

Since this is an initial accreditation, the Panel couldn't assess the "demonstration of achievement of the intended learning outcomes" since diploma theses, exams, student projects, essays, etc. do not yet exist. The Panel is therefore not assessing the actual achievement of the ILOs per se, but the partners' preparedness/planning and willingness to ensure the achievement.

It is therefore of paramount importance that follow-up accreditations focus on evidence of achievement of the programme ILOs.

Additional details and evidence (e.g., assessment rubrics and project descriptions) would have significantly helped to assess the preparedness on aforementioned aspects.

#### ***Strong points of the proposal:***

- Every course has explicit learning outcomes (ILOs).
- There is a matrix showing the contribution of each course to the programme ILOs.
- An example was provided justifying the contribution of course ILOs to programme ILOs for a single course.
- The course assessments are aligned with the course ILOs; this will be verified by the Examination Board for every assessment.
- The teaching and learning strategy, assessment methods and support measures necessary to assure the achievement of the course ILOs are described.
- The provided courses reflect (at a global level) that the programme ILOs are achieved.

#### ***Points of improvement / areas for further development:***

- The description of the overall logic of the programme, its components, and its coherency should be improved.
- Produce a detailed justification of the contribution of every course to the programme ILOs.
- Provide more developments on the assessment methods with the use of rubrics and other assessment methods.
- The quality of some course description forms and the usefulness of the way some sections are filled-out is underwhelming.

**Assessment:**

This criterion is partially satisfied, mostly because it is impossible to assess achievement of a programme which has not yet started.

**Recommendations:**

- Ensure that teachers are aware of their responsibility w.r.t. the programme ILOs and not only to their own courses' ILOs.
- Mention the contribution of each course to the programme ILOs in the course description forms.
- Decompose the (rather general) programme ILOs into operational ILOs and show how the course ILOs contribute to these operational ILOs.
- Maintain a document describing and justifying the contribution of each course to the programme ILOs and make it available to the teachers as input for their teaching methods and activities.

### **3.4. REGULATED PROFESSIONS**

Not applicable.

## 4. Study Programme

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### 4.1. CURRICULUM

*The structure and content of the curriculum should be fit to enable the students to achieve the intended learning outcomes.*

- *The curriculum needs to emphasise the 'joint' character of the programme. The structure of the curriculum and its content should lead to synergy of the contributions of the consortium partners.*
- *Each partner should have their clear and unique role and contribution to the curriculum.*

#### **Evidence:**

- Self-evaluation report (SER)
- ELABORAT Joint Study Programme
- Additional evidence provided following a request from the Panel
- Interview with the Joint Programme Committee

#### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. The matrix provided on page 40 of the SER indicates the contribution of each course to the programme's ILOs and shows adequate coverage by the set of mandatory courses.

The Panel finds that both partner institutions contribute to the programme and their contributions are complementary and based on their respective strengths.

The Panel also finds that the focus is, by design, clearly on software rather than on hardware.

#### ***Strong points of the proposal:***

- The consortium has indicated a number of the best practices of each institution they will adopt jointly.
- The mix of subjects handled in the various courses is appropriate to reach the objectives of the programme.
- The curriculum provides a detailed list of courses, with their ILOs, their syllabi and the responsible lecturers.
- The rationale behind the joint character of the programme is provided (e.g., similar study programmes, previous collaboration and so on).
- International skills and competencies have been provided from such a synergy.
- Both partner institutions have a clear contribution to the curriculum (based on the course offerings).
- The joint programme leverages the strong project-based learning experience of the partners.
- Topics and materials generally are recognized to be state of the art, although this is hard to ensure for a new programme.

***Points of improvement / areas for further development:***

- The available presentation of the programme doesn't show the logical order (precedence) between courses other than through the organization in semesters. Surprisingly, many course description forms mention no prerequisites.
- The way the course description forms are filled-out needs to be reviewed (quality assurance).
- The need to choose a number of elective courses to reach 30 ECTS credits per semester should be made more explicit, including possible rules about acceptable choices.
- The complementarity of the consortium partners is not entirely made evident (e.g., why some courses are offered by one partner and others by the other one). Which are the ILOs that a partner can't (or would find difficult to) achieve alone?
- Regarding joint supervision, it is still not completely clear how this is going to be achieved by the partners.

**Assessment:**

This criterion is partially satisfied.

**Recommendations:**

- Provide a schematic showing the logical structure of the programme, including precedence relations between courses.
- Make sure that the prerequisites of each course are stated as ILOs needed to have been achieved previously in order to qualify for enrolment in the course.
- Make sure that the course description forms are peer-validated and subjected to quality control.
- A table with mandatory/elective classes per semester needs to be in the Study and Examination Regulations Handbook, with a clear statement of the requirements to graduate.
- Explicitly list the criteria for successful completion in the regulations (meet the required number of ECTS credits? Complete all mandatory courses and a set of selective courses?).

## 4.2. CREDITS

*The European Credit Transfer System (ECTS) should be applied properly and the distribution of credits should be clear.*

### **Evidence:**

- Self-evaluation report (SER)
- Diploma Supplement
- SER Annex 7 – Course Description
- Excel file “Module data” provided on request of the Panel

### **Analysis:**

After analysis of the documents provided by the consortium, the Panel finds that the European Credit Transfer System is applied correctly in the joint programme.

### ***Strong points of the proposal:***

- The number of ECTS credits attributed to each course is determined properly based on the workload; it includes autonomous student work.
- The consortium has prepared a model of Diploma Supplement for the joint programme.
- Both institutions state that they will recognize credits attributed by the other institution.

### ***Points of improvement / areas for further development:***

- Some of the values used to specify the number of credits for every course appear to have been computed rather than decided or based on estimations of student workloads; this sometimes leads to not very credible number of hours for parts of the workload.
- Some of the courses exhibit a detailed distribution of the number of credits for a given topic, the sum of which is greater than the number of credits attributed to the course. These course description forms need to be reviewed (quality assurance).
- It is not clear why some courses have 4 and some others 5 ECTS credits. This is particularly important for project-based courses, which have a higher degree of flexibility and freedom.

### **Assessment:**

This criterion is fully satisfied.

### **Recommendations:**

- Clearly specify (e.g., in the course description forms), the estimated duration of every different type of student activities: lectures, exercises, workshops, seminars, lab work, autonomous work, group work, exam preparation, visits, etc.
- Clarify what is the minimum number of credits required per semester and if credits are portable between semesters. Is a minimum number of credits required for 2<sup>nd</sup> year mobility?

### **4.3. WORKLOAD**

*A joint bachelor programme will typically amount to a total student workload of 180-240 ECTS-credits; a joint master programme will typically amount to 90-120 ECTS-credits and should not be less than 60 ECTS-credits at second cycle level (credit ranges according to the FQ-EHEA); for joint doctorates there is no credit range specified. The workload and the average time to complete the programme should be monitored.*

#### **Evidence:**

- Self-evaluation report (SER)
- Student Handbook
- Study and Examination Regulations
- Excel file "Module data"
- Interview with the Joint Programme Committee

#### **Analysis:**

The Panel has examined the information made available by the consortium's partners. The Panel confirms that the joint programme's workload is expressed in terms of ECTS credits for individual courses and that the full programme's workload amounts to 120 ECTS credits.

#### ***Strong points of the proposal:***

- The workload and the average time to complete the programme are to be monitored.

#### ***Points of improvement / areas for further development:***

- No evidence was provided about how the workload and the average time to complete the programme will be monitored.
- The programme is presented as a two-year full-time curriculum, with rather stringent requirements about attendance. No indication is given about provisions for students with part-time jobs.

#### **Assessment:**

This criterion is fully satisfied.

#### **Recommendations:**

- Make monitoring of the workload and of the average time to complete the programme part of the quality assurance processes.
- Clearly specify (e.g., in the course description forms), the estimated duration of every different type of student activities: lectures, exercises, workshops, seminars, lab work, autonomous work, group work, exam preparation, visits, etc.
- It seems, from the interviews, that many students enrolled in current programmes start working early on, regardless of whether the programme is full-time or not. Perhaps this should be taken into account when gauging the workload of the joint programme.

# 5. Admission and Recognition

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## 5.1. ADMISSION

*The admission requirements and selection procedures should be appropriate in light of the programme's level and discipline.*

### **Evidence:**

- Self-evaluation report (SER)
- Document "Admission\_Algebra\_EPITECH\_IoT and AI.pdf"
- Interview with the Joint Admission Board

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews and finds that the enrolment requirements are appropriate for the joint programme.

Student admission is organised jointly, i.e., by both institutions. EPITECH performs testing of students while ALGEBRA handles administration procedures.

### ***Strong points of the proposal:***

- The admission procedure is described in detail; it includes verifying the candidates' credentials, a test of enrolment requirements, and an interview. The admission requirements and selection procedures are appropriate; the procedures are run jointly by the Joint Admission Board.
- The consortium shows a reasonable degree of flexibility with regard to satisfying enrolment requirements: 'good' candidates with some weaknesses may be accepted with some additional preparation work.
- The institutions apply pre-defined and transparent guidelines covering student admission, progression, assessment and certification.
- The admission requirements comply with national and institutional regulations.

### ***Points of improvement / areas for further development:***

- The description of the programme enrolment requirements is not precise enough to allow a potential candidate to self-assess whether he/she meets the requirements.
- The case of students who need to work during studies needs to be explicitly addressed.
- The Student Agreement still needs to be written.
- Preparations/Tutorials for "weaker" students who have been or will be admitted are still to be made available.
- Some of the admission criteria need further clarification, e.g., "Demonstrate knowledge of Object-Oriented Programming as required": which achieved LOs are precisely required? How many ECTS credits? How to take relevant industry experience into account? Similar observation for "Demonstrate basic knowledge of Design

Patterns as required". Also given that a BSc degree in CS is mandatory (thus every candidate will have had a couple of courses in OOP), why are additional criteria needed?

- OOP and design patterns knowledge can be evaluated through testing being organized by the Joint Admissions Board and supported by programme directors and faculty. No exemplar test or syllabus for this testing has been provided. When will this testing take place (the joint programme is intended to start in September 2021)?

**Assessment:**

This criterion is fully satisfied.

**Recommendations:**

- Formulate the programme enrolment requirements as achieved LOs: "in order to be accepted, a candidate should be able to...".
- Provide self-assessment tools for prospective candidates.
- All relevant information of the programme regarding the process (admission criteria, application process and selection criteria, etc.) needs to be gathered on a joint webpage (currently still in the to-do list of the institutions).

## 5.2. RECOGNITION

*Recognition of qualifications and of periods of studies (including recognition of prior learning) should be applied in line with the Lisbon Recognition Convention and subsidiary documents.*

### **Evidence:**

- Self-evaluation report (SER)
- Document "Admission\_Algebra\_EPITECH\_IoT and AI"
- Interview with the Joint Admission Board

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews and finds that recognition of prior learning is applied in accordance to national legislations and is in line with the Lisbon Recognition Convention and subsidiary documents. This is done via a process that the student needs to inform the joint Admission Board.

### ***Strong points of the proposal:***

- A dedicated Recognition of Prior Learning team needs to validate and potentially call students for assessment.

### ***Points of improvement / areas for further development:***

- The process for validation of academic credits due to experience has not been described; it is a part of the European requirements.
- The process for getting the certificate as written proof for exemptions of specific learning outcomes is cumbersome. It's not entirely clear how this process will practically work for different types of experience (e.g., a candidate who has taken an equivalent course or has industry experience in these ILOs).

### **Assessment:**

This criterion is fully satisfied.

### **Recommendations:**

- It would be useful to develop a more agile and (semi-)automated process for prior learning recognition. The current solution might work, but it is not optimal.
- Clarify how the individual testing/assessment (if needed) will take place.

# 6. Learning, Teaching and Assessment

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## 6.1. LEARNING AND TEACHING

*The programme should be designed to correspond with the intended learning outcomes, and the learning and teaching approaches applied should be adequate to achieve those. The diversity of students and their needs should be respected and attended to, especially in view of potential different cultural backgrounds of the students.*

### **Evidence:**

- Self-evaluation report (SER)
- Additional evidence provided after request by the Panel
- Interview with the Joint Programme Committee
- Interview with teachers
- Interview with students in existing programmes
- Interview with Student Support services

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. A matrix provided in the SER (p. 40) shows the contribution of each course to the programme ILOs (see also section 3.3 of this report) and provides reasonable evidence that the joint programme's mandatory courses will lead to achieving the programme's ILOs and key learning goals.

Since the programme aims to provide professional qualifications, the Panel finds that it is quite rightly strongly based on experiential learning ("learning by doing"), in which both partners have significant and relevant experience.

The Panel also finds that both partners have extensive and successful experience with international students with different cultural backgrounds.

Teaching methods are tailored to meet the needs of a diverse student population, especially those with caring responsibilities and disabilities, e.g., through the possibility of extension of exams, use of additional and (to some extent) specialized resources.

### ***Strong points of the proposal:***

- Emphasis on project-based approach and Interactive learning.
- Opportunities for student team work in projects.
- Provision for student mentoring.
- Active monitoring of individual students' progress.
- Course description forms describe overall objectives, context and themes of each course.

### ***Points of improvement / areas for further development:***

- Teaching is very largely project-based. It hasn't been shown that project-based learning is always the right choice to achieve the stated course ILOs.

- Lots of project work may lead to temporary or permanent overload: active and constant monitoring will be needed, with rapid reaction capability.
- Emphasis on autonomous learning and producing deliverables may lead to a lack of awareness of possibly useful results from theory or from experience.
- Clarify how the programme consortium will utilize the data collected from students', teachers and industry and how it will regularly evaluate and adjust the pedagogical methods and modes of delivery. There are provisions for collecting these data, but the utilization is as yet unclear.
- The IT domain typically has a gender balance problem, it would have been interesting to identify ways forward (not only attracting more female students but also supporting them adequately).

### **Assessment:**

This criterion is partially satisfied.

### **Recommendations:**

- "Learning by doing" is fine, but the "doing" should not overshadow the "learning" and teachers should put more emphasis on the achievement of ILOs than on the various project deliverables.
- Document the choice of teaching/learning methods w.r.t. course ILOs. Is project-based learning always the most appropriate?
- Require teachers to document design choices to facilitate sharing of experience and good practices.
- Periodically assess the efficiency and the efficacy of pedagogical methods to reach ILOs.
- Try to use "learning" more often than "teaching" in the programme's communication to stress the student-centred approach of the programme.
- One of the objectives of project work should be to achieve (and assess) ILOs in the socio-affective (relational) domain: team leadership, conflict resolution, task assignment, etc.
- In a future accreditation, the accreditation Panel will need to focus on how the partners demonstrate that the educational goals are achieved.

## **6.2. ASSESSMENT OF STUDENTS' ACHIEVEMENT OF INTENDED LEARNING OUTCOMES**

*The examination regulations and the assessment of the achieved learning outcomes should correspond with the intended learning outcomes. They should be applied consistently among partner institutions.*

### **Evidence:**

- Self-evaluation report (SER)
- Document "Instructions for taking and passing a course"
- Document "Study and Examination Regulations"
- Document "Student Handbook"
- Additional evidence provided after request by the Panel
- Interview with the Examination Board
- Interview with teachers
- Interview with students in existing programmes

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. The Panel approves the fact that the consortium strongly emphasizes the need for alignment between course ILOs and assessment methods and contents and also alignment with teaching methods. The Examination Board is tasked to verify this requirement a priori.

The Panel notes that the Quality Enhancement and Curriculum Development Committee is tasked with the analysis of assessment results and that students are implicated in the quality control of assessments since parts of the student surveys relate to the assessment process.

The Panel also notes that each partner institution keeps the records of students of the joint programme in their own database and that these data will be periodically synchronised among the partners.

### ***Strong points of the proposal:***

- Quality assurance of all assessments, both a priori and a posteriori.
- Systematic use of criteria-based assessment methods.
- Mentors tasked to provide regular feedback during semester.
- Some instances of peer-to-peer assessments.
- Stated intent to regularly evaluate and adjust the pedagogical methods and modes of delivery.
- The assessment methods used are described to a certain extent.
- The examination regulations and the grading criteria are described and will be published and easily accessible.
- The proposal describes and takes into account the national, institutional and linguistic differences.
- Student complaints/appeals about grading or other issues regarding the assessment process are handled based on the national regulations.
- Rules for taking exams and retake them in case of failure are clearly defined.

***Points of improvement / areas for further development:***

- Provide enough opportunities for formative assessment without contribution to final grade.
- Provide enough opportunities for self-assessment.
- Assistance for students with care responsibilities or special support needs should be more clearly regulated.
- The Panel perceives some challenges in the practical implementation of the joint programme (e.g., addressing the differences between how the national systems mandate things).
- It is unclear how the assessment methods used correspond with the learning tasks (e.g., why some courses have one form of assessment and not the other, especially how summative and formative assessment methods are applied).
- It is not clear how examinations passed at one of the consortium partners as part of the joint programme will be automatically recognized by the other partners. Will each student have a record in both institutions? Will those two systems be fully interoperable? Or this will be done manually (e.g., like in Erasmus+)?
- The meeting with the students revealed inconsistencies with respect to detailed feedback regarding code quality, architectural decisions, etc. EPITECH is apparently performing better here.

**Assessment:**

This criterion is partially satisfied.

**Recommendations:**

- Explore the use of "rubrics" for assessments.
- Assessments should always aim at providing the most relevant and useful feedback to help students progress in their learning.
- The examination regulations and the grading criteria need to be published and easily accessible.
- Assistance for students with care responsibilities should be clearly regulated, similarly with what we see for students with special support needs.
- The partners need to develop shared standards for assessment criteria to ensure reliability for students (e.g., common rubrics and shared project descriptions, assignments and exams). Future re-accreditation needs to assess those aspects.
- The joint committees have been defined, but how those committees will operate is as yet unclear. Will every single element that contributes to assessment (e.g., exams, assignments, projects and so on) have to go through the joint committees? For this process to operate effectively, it is important to define the pipeline.

## 7. Student Support

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*The student support services should contribute to the achievement of the intended learning outcomes. They should take into account specific challenges of mobile students.*

*Support should include pre-arrival and upon arrival services, as well as other support services (insurance, accommodation, equity policies, visas, ...).*

### **Evidence:**

- Self-evaluation report (SER)
- Annex 10 – Student Handbook
- Interview with students engaged in current study programmes
- Interview with Student Support Services

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews and finds that both partners are fully aware of the needs of mobile students and have made extensive provisions for meeting those needs. They both have significant prior experience with international students.

The Panel also finds that the partners have set up detailed procedures for handling student complaints through joint commissions or boards (Academic Commission/Admission Board – selection and admission, Examination Board – exams, academic judgment, Quality Enhancement and Curriculum Development Committee – anonymous complaints).

### ***Strong points of the proposal:***

- Both institutions have experienced International Office staff.
- Existence of Introductory weeks to facilitate integration.
- Existence of a Buddy system, of peer support
- Existence of Career Centres
- Existence of Student Counselling Coaches
- The procedures for handling student complaints follow national standards.
- The described learning resources and student support resources are adequate to contribute to the achievement of the ILOs.
- There are certain provisions to address the specific settings of the joint program mostly through the institutions' experience with mobility programmes (e.g., Erasmus+).
- The consortium has some experience with international mobility of students and faculty members.
- The Student Handbook provides a lot of essential information in one place.
- Both institutions are actively working with external companies to secure accommodation for students.
- Existence of onboarding programmes, which facilitate cultural immersion for foreign students.

***Points of improvement / areas for further development:***

- No indications given about the existence of an equity policy for students with special requirements.
- It is unclear what support the Joint Programme provides for students with children and for students who need part-time work.
- Information on language courses wasn't properly provided.
- Student counselling practitioners need to be professionally trained.
- A number of information items which were provided to the Panel were not yet clear enough and the consortium had to explicitly ask for clarification (e.g., local coordinators, how students receive all the information, ...).

**Assessment:**

This criterion is fully satisfied.

**Recommendations:**

- Early development of the necessary materials (e.g., posters, flyers) to make information available to students.

## 8. Resources

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### 8.1. STAFF

*The staff should be sufficient and adequate (qualifications, professional and international experience) to implement the study programme.*

#### **Evidence:**

- Self-evaluation report (SER)
- Document "Teachers Data"
- Interview with Academic Council
- Interview with teachers

#### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews and finds that the teaching staff consists of a mix of permanent staff (66%) and external teachers currently active in industry (34%). All of them hold at least an EQF Level 7 degree. The staff and the respective teaching portfolio is documented. The staffing is sufficient to provide for the running of the programme. If needed, adjunct staff will be hired.

The Panel also notes that 11 out of 13 EPITECH's teaching staff listed are EPITECH graduates with a level 7 degree "Expert in Information Technology"; very few of them have other, more "formal" degrees (Master or PhD). The staff at ALGEBRA is much more diversified in this respect. When faced with this observation, EPITECH answered that they are not training students for/by research and more formal education of teachers is not needed in the context of the joint programme. However, the Panel believes that having some of the faculty trained in research is not the same as training students for research; research allows to step back from the concrete problems and expose a broader focus. Another argument of EPITECH for hiring its own graduates as teachers is that they are already familiar with the project-based learning method. The Panel finds that this should be weighed against the risk of providing too narrow a perspective to students.

#### ***Strong points of the proposal:***

- Significant contribution of teachers active in industry, very useful in a professional programme.
- Significant positive experience with international students.
- Pedagogically-oriented teacher workshops to develop pedagogical skills.

#### ***Points of improvement / areas for further development:***

- Weak international mobility of teachers.
- Use an agreed-upon format for all CVs of teaching staff.
- Staff resources for the coordination activities should be outlined in case it is involved in the implementation of the study programme.

- Staff qualifications were not always clear in their CVs. There was a discrepancy on the formats used, making it difficult to assess the international and professional experience of the involved staff.
- EPITECH staff lacks diversity.

**Assessment:**

This criterion is fully satisfied.

**Recommendations:**

- Ensure that teachers from industry are made aware of pedagogical requirements to facilitate achieving the ILOs.
- Organize a systematic mandatory professional development programme in the areas of pedagogy and pedagogical tools, in particular with respect to mentoring; make participation part of the contract.
- Use a common template to make staff information available, with all the essential information, e.g., degrees, any publications, experience from both teaching and/or industry practice.
- Aim at diversifying teaching staff to encourage plurality of viewpoints.
- The mix of utilizing existing teaching personnel and hiring new adjunct ones is a feasible solution for the start of the programme. However, it is recommended that, for the sustainable development of the joint programme, there might be a need for dedicated (permanent) personnel. This will help both in terms of the stability of the resources, but also on the sense of agency from the staff.

## 8.2. FACILITIES

*The facilities provided should be sufficient and adequate in view of the intended learning outcomes.*

### **Evidence:**

- Self-evaluation report (SER)
- Site visit of ALGEBRA
- Videos provided by EPITECH
- Interview with Joint Programme Committee, with external stakeholders, and with students engaged in current study programmes

### **Analysis:**

The site visit of ALGEBRA by part of the Panel verified the assertions made by ALGEBRA in the SER about facilities and equipment. The videos submitted by EPITECH provided visual information about the institution's premises, facilities, and learning environment.

When interviewed by the Panel, students confirmed the facilities and equipment to be adequate.

The Panel notes that ALGEBRA plans to move into a larger building, which is currently under construction, as well as have a student dormitory on campus.

### ***Strong points of the proposal:***

- The facilities can accommodate more (but not many more) students.
- The students will be able to have access to the tools needed for their learning.
- Students from current system study programmes reported good teaching environments.
- Students have access to quality equipment (computers, 3D printers, allocated budget, etc.), which they are allowed to use to pursue their interests in their spare time.
- A number of external stakeholders claimed to be ready to provide hardware, software, and internships.

### ***Points of improvement / areas for further development:***

- From the discussion it appeared that different courses use different learning management systems (LMS) for their teaching; it would be preferable if the teaching staff were to harmonize the use of this type of resources.

### **Assessment:**

This criterion is fully satisfied.

### **Recommendations:**

- For the first round of admissions, the joint study programme currently possesses the necessary capacity regarding facilities. For the sustainable development of the programme, however, there might be a need for extending some of the facilities (from the

discussion, it was noted that the facilities can accommodate an additional 10%, but no more than that).

## **9. Transparency and Documentation**

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*Relevant information about the programme like admission requirements and procedures, course catalogue, examination and assessment procedures etc. should be well documented and published by taking into account specific needs of mobile students.*

### **Evidence:**

- Self-evaluation report (SER)
- Various documents provided as annexes to the SER
- Interviews with the various bodies: Academic Commission, committees, boards and with students of existing programmes

### **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. Even though a number of documents have already been prepared, this is an area where the Panel finds that significant work remains to be done before the programme expected starting date (September 2021).

#### ***Strong points of the proposal:***

- There is an obvious commitment of the partners to the need for effective communication through various channels.
- Many existing documents cover major aspects of the programme and are ready for communication to stakeholders.
- Career monitoring of students and former students is planned.
- The curriculum, list of courses and number of ECTS required to complete the programme are documented.
- Tuition fees and admission criteria have been decided upon and specified.

#### ***Points of improvement / areas for further development:***

- The announced joint website is still to be built.
- The flow of information to various stakeholders is not yet made fully explicit.
- Examination and assessment procedures need to be described in more detail (e.g., especially assessment for project courses).
- There is a tight time-frame for starting in the 2021-2022 academic year; the partners therefore need to start immediately with developing, refining and publishing the necessary information there (e.g., syllabi, assessment, agreement between student and the programme consortium, the date and way of announcing and publishing information).

### **Assessment:**

This criterion is partially satisfied.

### **Recommendations:**

- Further develop the description of assessment procedures for the courses.

- Initiate the procedures for effective communication of the needed information to candidates.

# 10. Quality Assurance

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*The cooperating institutions should apply joint internal quality assurance processes in accordance with part one of the ESG.*

## **Evidence:**

- Self-evaluation report (SER)
- Document "Quality Handbook"
- Student Survey questionnaire
- Interviews with QECD Committee and with Examination Board

## **Analysis:**

The Panel has examined the information made available by the consortium's partners and the answers provided to the questions asked during the interviews. The Panel finds that the ALGEBRA partner is obviously familiar with procedures for external quality assurance from its experience with its current study programmes. This does not appear to be the case for EPITECH, whose programmes have not yet been subjected to QA procedures according to the ESG.

### ***Strong points of the proposal:***

- The partners have shown an explicit commitment to internal and external quality assurance according to ESG.
- Two bodies are explicitly tasked with QA of two main areas: the curriculum (QECD Committee) and the assessments (Examination Board).
- The Quality Handbook provides indications about the sources of the data which will be collected (e.g., surveys with students, industry, alumni and so on).

### ***Points of improvement / areas for further development:***

- QA is only defined at the level of general principles in the current version of the Quality Handbook.
- There is a lack of a real QA policy. ESG 1.1 states that "*Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders*".
- There is a lack of a clear policy on the on-going monitoring and periodic review of programmes (cfr. ESG 1.9) that harmonizes the routines of the two institutions and addresses potential conflicts.
- There is no explicit description of QA for several important processes (e.g., student admission, information management, communication, student support, teaching staff, resources, quality assurance - see the 10 standards in ESG Part 1.)
- More attention needs to be paid on the 'joint' aspect (e.g., will the joint study programme inherit the procedures from ALGEBRA or EPITECH, or come up with a hybrid form?)
- It's not clear how the data collected will be used (e.g., inform the design of the study programme). For instance, what happens is the data collected from the two institutions don't fully agree?

**Assessment:**

This criterion is partially satisfied.

**Recommendations:**

- Formulate and publish a QA policy according to the requirements of the ESG.
- Answer the 4 main questions: *What is the institution trying to do? How is the institution trying to do it? How does the institution know it works? How does the institution change in order to improve?*
- Produce a detailed QA plan: processes, indicators, objectives, monitoring, reporting, periodicity, etc. and a plan for gradual implementation; include QA of the QA processes.
- Ensure the reliability of student surveys by applying validated methods only.
- Further develop the quality assurance mechanisms to make sure that there is a clear pipeline on how the collected data will be utilized.
- Exchange information between the two partners to harmonize the QA processes.

# 11. Summary of Assessments

The following table shows an overview of the assessments:

<b>Standard</b>	<b>Assessment</b>
<b>ELIGIBILITY</b>	
- Status	<b>Fully implemented</b>
- Joint design and delivery	<b>Fully implemented</b>
- Cooperation agreement	<b>Fully implemented</b>
<b>LEARNING OUTCOMES</b>	
- Level	<b>Fully implemented</b>
- Disciplinary fields	<b>Partially implemented</b>
- Achievement	<b>Partially implemented</b>
- Regulated professions	<b>N.A.</b>
<b>STUDY PROGRAMME</b>	
- Curriculum	<b>Partially implemented</b>
- Credits	<b>Fully implemented</b>
- Workload	<b>Fully implemented</b>
<b>ADMISSION AND RECOGNITION</b>	
- Admission	<b>Fully implemented</b>
- Recognition	<b>Fully implemented</b>
<b>LEARNING, TEACHING AND ASSESSMENT</b>	
- Learning and teaching	<b>Partially implemented</b>
- Assessment of students	<b>Partially implemented</b>
<b>STUDENT SUPPORT</b>	<b>Fully implemented</b>
<b>RESOURCES</b>	
- Staff	<b>Fully implemented</b>
- Facilities	<b>Fully implemented</b>
<b>TRANSPARENCY AND DOCUMENTATION</b>	<b>Partially implemented</b>
<b>QUALITY ASSURANCE</b>	<b>Partially implemented</b>

## **Panel conclusion:**

The Panel recommends that the Joint programme "Graduate Study Programme in Computer Science – Internet of Things and Artificial Intelligence" be accredited.

# Annexes

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## 1. Site visit agenda

<p>Reakreditacija združenog diplomskog stručnog studija u području računarstva –</p> <p><i>Internet of Things and Artificial Intelligence</i> koji izvode</p> <p>Visoko učilište Algebra, Ilica 242, 10000 Zagreb</p> <p><i>and</i></p> <p>EPITECH, 24 Rue Pasteur, 94270 Le Kremlin-Bicêtre, France</p>	<p>Re-accreditation of the Joint programme Graduate Study Programme in Computer Science -</p> <p><i>Internet of Things and Artificial Intelligence</i> of</p> <p>University College Algebra, Ilica 242, 10000 Zagreb</p> <p><i>and</i></p> <p>EPITECH, 24 Rue Pasteur, 94270 Le Kremlin-Bicêtre, France</p>
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*ponedjeljak, 15. ožujka 2021.*

*Monday, 15 March, 2021*

***Preliminarni posjet Stručnog povjerenstva konzorciju visokih učilišta***

***Preliminary site-visit of Expert Panel members to the consortium of HEIs***

	<b>Ponedjeljak, 15. ožujka 2021.</b>	<b>Monday, 15 March, 2021</b>
<b>10:00 – 11:00</b>	Sastanak članova stručnog povjerenstava s <b><i>dekanima i prodekanima</i></b> visokih učilišta u konzorciju	Meeting with the <b><i>Deans and Vice-Deans</i></b> of the consortium partners
<b>11:00 – 12:00</b>	<b><i>Analiza dokumenata</i></b> konzorcija i <b><i>video materijala</i></b> visokog učilišta EPITECH	<b><i>Analysis</i></b> of the consortium <b><i>documents</i></b> and of the EPITECH <b><i>video footage</i></b>

12:00 – 13:30	<i>Radni ručak</i>	<i>Working Lunch</i>
13:30 – 15:00	<b>Obilazak fakulteta</b> (predavaonice, informatičke učionice, knjižnica, prostorije za studente, nastavnički kabineti, knjižnica) Visokog učilišta Algebra	<b>Tour of the Faculty</b> (classrooms, computer classrooms, library, student services, rooms for student activities,) <b>and participation in teaching classes</b>

***Prvi dan reakreditacije  
u virtualnom okruženju***

***First day of re-accreditation  
in virtual form***

	<b>Utorak, 16. ožujka 2021.</b>	<b>Tuesday, 16 March 2021</b>
8:50 – 9:00	Spajanje na ZOOM <a href="https://zoom.us/j/92927775237">https://zoom.us/j/92927775237</a> s upravom konzorcija Visokih učilišta	Joining ZOOM <a href="https://zoom.us/j/92927775237">https://zoom.us/j/92927775237</a>  with the Management Board of the higher education institutions in the Consortium
9:00 – 9:15	<i>Interni sastanak članova stručnog povjerenstava</i>	<i>Internal meeting of the panel members</i>
9:15 – 10:15	Sastanak s <b>Akademskim vijećem</b> združenog studija	Meeting with the <b>Academic Commission</b> set by Cooperation Agreement between the partners
10:15 – 10:30	<i>Pauza</i>	<i>Break</i>
10:30– 11:30	Sastanak sa <b>Zajedničkim programski vijećem</b> i <b>Povjerenstvom konzorcija za upravljanje kvalitetom i razvojem kurikuluma</b> združenog studija	Meeting with the <b>Joint Programme Committee</b> and <b>Quality Enhancement and Curriculum Development Committee</b> set by Cooperation Agreement between the partners

11:30 – 11:45	<i>Pauza</i>	<i>Break</i>
11:45 – 12:45	Sastanak s <b>nastavnicima</b> u stalnom radnom odnosu angažiranim na združenom studijskom programu	Meeting with full-time employed <b>teachers</b> who teaches at joint study programme
12:45 – 13:30	<i>Pauza za ručak</i>	<i>Lunch break</i>
13:30 – 14:30	Sastanak s <b>vanjskim dionicima studijskog programa</b> - predstavnicima strukovnih i profesionalnih udruženja, poslovna zajednica, poslodavci, stručnjaci iz prakse, organizacijama civilnog društva, vanjski predavači	Meeting with <b>external stakeholders of the study programme</b> - representatives of professional organisations, business sector/industry sector, professional experts, non-governmental organisations, external lecturers
14:30 – 14:45	<i>Pauza</i>	<i>Lunch</i>
14:45 – 15:45	Sastanak sa <b>studentima</b> (otvoreni sastanak za sve studente)	Meeting with <b>students</b> (open meeting)
15:45 – 16:00	Sastanak s <b>Odborom za ocjenjivanje</b>	Meeting with <b>Examination Board</b>
16:00 –	Interni sastanak članova stručnog povjerenstva – osvrt na prvi dan i priprema za drugi dan	Internal meeting of the Expert Panel members – comment on the first day and preparation for the second day

***Drugi dan reakreditacije  
u virtualnom okruženju***

***Second day of re-  
accreditation in virtual  
form***

	<b>Srijeda, 17. ožujka 2021.</b>	<b>Wednesday, 17 March 2021</b>
9:50 – 10:00	Spajanje na <a href="https://zoom.us/j/92927775237">https://zoom.us/j/92927775237</a>	Joining the Zoom <a href="https://zoom.us/j/92927775237">https://zoom.us/j/92927775237</a>

	ZOOM – VU u konzorcijumu	HEIs in Consortium
<b>10:00 – 10:45</b>	Sastanak sa <b>Zajedničkim upisnim odborom</b> združenog studija	Meeting with <b>Joint Admissions Board</b> set by Cooperation Agreement between the partners
<b>10:45 – 11:00</b>	Pauza	Break
<b>11:00 – 11:45</b>	Sastanak s predstavnicima <b>službi potpore studentima</b> ( <i>International Cooperation Office, Career Center, Erasmus + coordinator, etc.</i> ) i službom za komunikacije združenog studija	Meeting with <b>Student support services</b> ( <i>International Cooperation Office, Career Center, Erasmus + coordinator, etc.</i> ) and Communication Team set by Cooperation Agreement between the partners
<b>11:45 – 12:00</b>	<i>Pauza</i>	<i>Break</i>
<b>12:00 – 12:45</b>	Sastanak s <b>alumnijima</b> (bivši studenti koji nisu zaposlenici visokih učilišta u konzorciju)	Meeting with <b>Alumni</b> (former students who are not employed at the HEIs in consortium)
<b>12:45 – 13:15</b>	Interni sastanak povjerenstva	Internal panel meeting
<b>13:15– 13:30</b>	<b>Završni sastanak s dekanima i prodekanima</b> visokih učilišta u konzorciju	<b>Exit meeting with the Deans and Vice-Deans</b> of the consortium partners
<b>13:30 – 14:00</b>	<i>Pauza za ručak</i>	<i>Lunch Break</i>
<b>14:00– 16:00</b>	Interni sastanak povjerenstva	Internal panel meeting

2. Order of 10 July 2009 on the recognition by the French State of the "Ecole Pour l'Informatique et les Nouvelles Technologies" (Official Journal of the French Republic, 18 August 2009)

# Decrees, Orders, Circulars

## GENERAL TEXTS

### FRENCH MINISTRY OF HIGHER EDUCATION AND RESEARCH

#### Order of 10 July 2009 on the recognition by the French State of the "Ecole Pour l'Informatique et les Nouvelles Technologies"

NOR [Official Reference Number]: *ESRS0914746A*

The French Ministry of Higher Education and Research,  
Having regard to the French Education Code, in particular Articles L. 443-2, L. 443-3 and L. 443-4 thereof;  
Having regard to the French order of 23 April 2003 creating the national automated data processing application "SISE";  
Having regard to the opinion of the National Higher Education and Research Council dated 15 June 2009,

Hereby adopts this order:

**Art. 1.** – The "Ecole pour l'Informatique et les Nouvelles Technologies", situate at 18-24, rue Pasteur, 94270 Le Kremlin-Bicêtre, France, is recognised by the French State as of 01 September 2009.

**Art. 2.** – As part of the information system set up for student monitoring by the aforementioned Order of 23 April 2003, the institution provides the ministry responsible for higher education with annual information regarding the number of students it has enrolled.

**Art. 3.** – The Director-General of Higher Education and Occupational Integration [*DGESIP*] is responsible for implementing the present Order, which shall be published in the *Official Journal* of the French Republic.

Executed in Paris, on 10 July 2009.

On behalf of the Minister and by delegation:

*Director-General  
for Higher Education  
and Occupational Integration*  
P. HETZEL

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# Décrets, arrêtés, circulaires

## TEXTES GÉNÉRAUX

### MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE

Arrêté du 10 juillet 2009 portant reconnaissance par l'Etat  
de l'École pour l'informatique et les nouvelles technologies

NOR : ESR0914746A

La ministre de l'enseignement supérieur et de la recherche,  
Vu le code de l'éducation, et notamment ses articles L. 443-2, L. 443-3 et L. 443-4 ;  
Vu l'arrêté du 23 avril 2003 portant création de l'application nationale de traitement automatisé  
d'informations « SISE » ;  
Vu l'avis du Conseil national de l'enseignement supérieur et de la recherche en date du 15 juin 2009,

Arrête :

**Art. 1<sup>er</sup>.** – L'École pour l'informatique et les nouvelles technologies, située 18-24, rue Pasteur,  
94270 Le Kremlin-Bicêtre, est reconnue par l'Etat à compter du 1<sup>er</sup> septembre 2009.

**Art. 2.** – Dans le cadre du système d'information sur le suivi de l'étudiant institué par l'arrêté du  
23 avril 2003 susvisé, l'établissement fournit annuellement au ministère chargé de l'enseignement supérieur les  
informations relatives aux effectifs qu'il accueille.

**Art. 3.** – Le directeur général pour l'enseignement supérieur et l'insertion professionnelle est chargé de  
l'exécution du présent arrêté, qui sera publié au *Journal officiel* de la République française.

Fait à Paris, le 10 juillet 2009.

Pour la ministre et par délégation :  
*Le directeur général  
pour l'enseignement supérieur  
et l'insertion professionnelle.*  
P. HETZEL



## DÉCLARATION DU TRADUCTEUR

Je soussignée, Claire Bennett, Traductrice-Interprète Expert près la Cour d'Appel de Bastia (France), certifie que la traduction qui précède est conforme à la photocopie de l'original libellé en langue française.

## CERTIFICATE OF TRANSLATION

I, Claire Bennett, Translator-Interpreter sworn before the Court of Appeal of Bastia (France), hereby certify that the attached document is true and accurate to the best of my knowledge and ability. The appended sworn translation was drawn up from a photocopy of the original document in French.

Signature :



Tampon :  
Stamp



Date : 03/12/2020

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