**# Introduction**

Hi, I am Laura, your virtual assistant. I am here to help you and answer your questions regarding the international master of Biometrics and Intelligent Vision at UPEC.

**# Uni Name**

UPEC stands for University Paris-Est Creteil. The old name of this university is Paris 12. For more information check https://www.u-pec.fr/

**# Transportation**

From Paris, you can reach UPEC by taking the metro line 8, station Créteil université. Once you leave the metro station, turn right and keep walking

When you exit the metro station from the main entrance, turn right and walk straight ahead for about 7 minutes until you see a small footbridge. Cross the footbridge, and the university campus will be in front of you. Continue walking until you reach the library (Bibliothèque Universitaire). The Faculty of Science and Technology is 50 meters to the right of the library.

You can also use the RER D, station “Vert de maison”, or “Créteil Pompadour”. Expect to walk a little more in this case.

**# Scholarship**

The Office of scholarship (Scolarité) is located in the Faculty of Science and Technology, in building P. Once you reach the main entrance with the automatic gates, take the first door on your right, then the first office on your right.

**# CROUS and restaurant**

At Université Paris-Est Créteil (UPEC), you have several options for lunch:

1. University Cafeterias (Resto’U): UPEC has multiple university cafeterias operated by CROUS, offering affordable meals for students.
2. Local Restaurants: There are many restaurants surrounding the campus, providing a variety of cuisines and dining experiences.
3. Food Trucks and Cafés: Occasionally, food trucks and cafés set up around the campus, offering quick and diverse meal options.
4. Campus Vending Machines: For a quick snack or beverage, vending machines are available in various buildings on campus.

**# Address**

The address of the university is: UPEC, Faculty of Science and technology, 61 avenue du General de Gaulle 94010 Creteil Cedex France.

UPEC is in Creteil, a small city in the south east of Paris.

**# Master program's Name**

The name of this master program is: International Biometrics and Intelligent Vision.

**# Admission requirements**

A knowledge of Python programming is essential for this master's program. To gain a better understanding of this program, a background in Computer Science, Information Technology, Electrical Engineering, or related fields is recommended.

Overall, you can apply if you demonstrate proficiency in Python programming and a comprehensive understanding of IT tools. However, if your major is in a distinctly different field, such as biology, chemistry, history, or any area far from computer science, this program may not be suitable unless you possess exceptional skills in Python programming and data processing.

Don’t apply to this master if you don’t have skills in programming.

For this master's program, proficiency in Python programming and MySQL is required. Familiarity with HTML, JavaScript, Java, CSS, and PHP will further enhance your ability to succeed. Once admitted, we strongly recommend that you refine your skills in any area where you feel less confident.

**# Classroom access**

The entrance is secured with a smart lock that necessitates a confidential digital key. This key is utilized by a smartphone application. Therefore, to access the classroom, it is necessary to download the app and acquire the secret digital key from the administrator.

**# Classes attendance**

Class attendance is mandatory, whether online or on-campus.

**# Language certificate**

If you have completed your education in English, there is no requirement to provide proof of language proficiency. However, submitting IELTS or TOEFL scores, although not mandatory, is appreciated.

If you did not complete your education in English or are not comfortable with the language, your application will be rejected.

**# Language of master program**

The classes are conducted in English.

**# Accommodation**

No accommodations are provided by this master's program. If you already have a scholarship (e.g., Erasmus Mundus), please contact the administration.

**# Application options**

This master's program spans two years, consisting of Master 1 (M1: 1st year) and Master 2 (M2: 2nd year).

Depending on your qualifications and skills, you can apply to either M1 or M2.

If you're uncertain about applying to M1 or M2, we highly recommend that you apply to M1.

**# Credits ECTS**

ECTS stands for the European Credit Transfer and Accumulation System. It is a standardized system used across the European Higher Education Area (EHEA) to facilitate the recognition and comparison of academic qualifications and courses.

This program consists of 120 credits (ECTS), distributed as follows:

* First semester of Master 1 (M1): 30 ECTS
* Second semester of Master 1 (M1): 30 ECTS
* First semester of Master 2 (M2): 30 ECTS
* Second semester of Master 2 (M2): 30 ECTS

**# Master 1 courses**

Master 1 (M1) courses (courses in master 1 (M1)):

First semester (semester 1):

1. Data capture and processing (6 ECTS)
2. Pattern recognition (6 ECTS)
3. Software integration I (6 ECTS)
4. Communication technique (3 ECTS)
5. Bioscience (3 ECTS)
6. Project I (6 ECTS)

Second semester (semester 2):

1. Computer vision and machine learning I (6 ECTS)
2. Biometrics I (6 ECTS)
3. Software integration II (6 ECTS)
4. Project management (3 ECTS)
5. Ethics and privacy (3 ECTS)
6. Project II (6 ECTS)

For more information on the courses in master 1 (M1) program, please refer to "https:[//www.international-master-biometrics-intelligent-](about:blank)vision.org/master-1".

**# Master 2 courses**

Master 2 (M2) courses (courses in master 2 (M2)):

First semester (semester 1):

1. Biometrics II (6 ECTS)
2. Computer vision and machine learning II (6 ECTS)
3. AI and innovative workshops (6 ECTS)
4. Virtual and augmented reality (3 ECTS)
5. Research and professional culture (3 ECTS)
6. Project III (6 ECTS)

Second semester (semester 2):

1. Internship (30 ECTS)

For more information on the courses in master 2 (M2) program, please refer to "https:[//www.international-master-biometrics-intelligent-](about:blank)vision.org/master-2".

**# project I**

Project I refers to the initial semester project for Master 1 students in their first year. Typically, this project begins in October and concludes at the end of the first semester through a defense. The project topics are assigned by the head of the Master's program.

**# project II**

Project II is the second semester project for first-year Master's students (M1). It generally begins in February and concludes at the end of the semester through a defense. The project topics are provided by the head of the Master's program.

**# project III**

Project III refers to the first semester project of the second year in the Master's program (M2). It typically starts in October and concludes at the end of the semester. The project topics are assigned by the head of the Master's program.

**# project evaluations**

If you work with your classmates on the same project, it may happen that you are evaluated separately and differently. This is usually due to varying levels of understanding or differences in how students explain their contributions.

**# Exams and evaluations**

There are no traditional exams in this program.

Students are continuously evaluated through projects, assignments, exercises, and other assessments. Each lecturer may evaluate you at any time.

The grades are then submitted to the head of the program, and an average grade is calculated.

There are no re-sit exams. Students are expected to improve their grades during class sessions and through consistent assignment submissions.

**# Condition to pass a course and semester**

A course is considered passed if the average grade is 10/20 or higher.

If you do not pass a course, you can still pass the semester if the average of all courses is 10/20 or higher.

To pass M1, you need to pass both the first and second semesters separately. If one of the semesters is not passed, you will not pass M1.

To pass M2, you need to pass both the first semester and the internship separately. If one of these components is not passed, you will not pass M2.

If you fail M1 or M2, you can request to retake it in the next academic year by contacting the head of the program. The final decision is made by the program jury. Retaking a semester is not automatic, and your request may be rejected.

**# Grades request and appeal**

At the end of each semester, the master's program committee assesses and approves student results. The administration then edits transcripts or issues necessary certificates.

Upon successful completion of both semesters in M2, you will receive your final transcript and certificate.

If you don't pass a course, first ensure that all your assignments were submitted on time. Failure to submit assignments on schedule can result in a grade of 00 out of 20, which could significantly reduce your overall average. Grades are a reflection of your performance and are not subject to negotiation. The only scenario in which a grade might be reconsidered is if a lecturer mistakenly fails to evaluate your assignments that were submitted on time.

**# Conditions to pass M1**

To pass master 1 (M1), you need to pass both the first and second semesters separately. If one of the semesters is not passed, you will not pass master 1 (M1).

**# Conditions to pass M2**

To pass master 2 (M2), you need to pass both the first semester and the internship separately. If one of these components is not passed, you will not pass M2.

If you fail M1 or M2, you can request to retake it in the next academic year by contacting the head of the program. The final decision is made by the program jury. Retaking a semester is not automatic, and your request may be rejected.

It is worth noticing that internship at second semester of Master 2 (M2) is one course that worth 30 ECTs. If you fail your internship, you will fail the second semester of Master 2 (M2) as well.

**# Internship offers**

1. To find internships, you can use different platforms like, welcomeToTheJungle, LinkedIn, Indeed, and so on. Even if you want to do internship in research or academia, you can check with different universities.
2. Have a look on the list of french Research organizations, called GdR (Groupement de Recherche).
3. Association Bernard Gregoryie
4. Contact also International research labs.
5. Contact the administration to get the list of previous companies/research labs who hosted our former students.
6. Contact the Alumni.

**# List GDR in France**

Here is the list of GDR (Groupement de Recherche) or research groups in France that can be used to find a potential internship:

* Bioinformatique moléculaire (BIM)​​.
* Génie de la Programmation et du Logiciel (GPL)​​.
* Raisonnement, Apprentissage et Décision en Intelligence Artificielle (RADIA)​​.
* Informatique Géométrique et Graphique, Réalité Virtuelle et Visualisation (IG-RV)​​.
* Informatique Mathématique (IM)​​.
* Information, signal, images, vision (ISIS)​​.
* Modélisation, analyse et conduite des systèmes dynamiques (MACS)​​.
* Masses de Données, Informations et Connaissances en Sciences (MaDICS)​​.
* Méthodes et Applications pour la Géomatique et l’Information Spatiale (MAGIS)​​.
* Recherche Opérationnelle (RO)​​.
* Robotique​​.
* Réseaux et Systèmes Distribués (RSD)​​.
* Sécurité Informatique (Sécurité)​​.
* System On Chip, Systèmes embarqués et Objets Connectés (SOC2) (rattaché à l’INSIS)​​.
* Traitement automatique des langues (TAL)​​.

**# Internship duration M2**

Master 2 (M2) internship should last either 5 or 6 months. It cannot be less than 5 months or more than 6 months under any circumstances.

It should be 5 or 6 months, which can start from February and March and must be finished in July or August. Please, note that the defense can be either in July or in September.

**# Internship in M1**

Internships during M1 are not mandatory. However, if you're interested in gaining practical experience and have received an offer from a company or research lab, an agreement can be arranged. Ensure that the internship starts no earlier than July 1st and concludes before the start of the new academic year. The administrative procedure is the same as in M2. For more information, contact [kania.lal-gurmes@u-pec.fr](mailto:kania.lal-gurmes@u-pec.fr).

**# Internship abroad**

Master 2 internships can be completed in any country other than France. The process requires signing an international agreement, different from the one required for internships in France. For inquiries regarding international M2 internships, please contact [kania.lal-gurmes@u-pec.fr](mailto:kania.lal-gurmes@u-pec.fr).

**# Internship: administrative procedure**

If you've already received an internship offer, ensure that you fill out the “Liaison Form” with the help of your internship provider, whether it's a company or a research lab. For more information on Liaison form please check https://sciences-tech.u-pec.fr/stages-emplois/creer-une-convention-de-stage-en-ligne. Once completed, send the form to Prof. Amine Nait-Ali for topic approval. Be sure to cc the internship service of the faculty. Once the topic is approved, you can begin the agreement editing process using the application PSTAGE. For more information on PSTAGE please check pstage.u-pec.fr.

**# Internship agreement generation**

If you have already received approval from Prof. Amine Nait-Ali, forward it to [kania.lal-gurmes@u-pec.fr](mailto:kania.lal-gurmes@u-pec.fr).

With the Liaison Form in hand, access the PSTAGE application to complete all agreement fields and proceed with creating the internship agreement. The PSTAGE website is: pstage.u-pec.fr. The internship office will email the agreement to you. Ensure that all involved parties sign the agreement.

**# Internship agreement duration process**

The internship agreement must be signed by all involved parties, with the final signature obtained from the dean via the internship service. This final signature typically takes one week. The internship office will email you the finalized agreement.

**# Internship obligations and restrictions**

For French master 2 (M2) internships, the submission must be done through the Pstage application.

By the rules, students are not allowed to have multiple agreements for one internship! They also are not allowed to have 2 internships at the same time.

You cannot edit or modify the internship agreement after creation. To rectify an error or edit internship agreement, contact kania.lal-gurmes@u-pec.fr to regain editing access.

**# Internship**

If you did your best to find an internship but didn’t receive an offer, you should discuss the situation with the head of the master's program. They might be able to propose a project for you to work on. This project should be 5-6 months long, similar to an internship. You will be evaluated using the same criteria as those used for evaluating internships.

**# Internship evaluation criteria**

Your internship will be evaluated based on the feedback from your company supervisor, the quality of your written report, and the effectiveness of your presentation during the defense.

**# Online student**

For information on joining this master's program as an online student, please contact the administration for detailed information and guidelines.

Online students can access course materials through various platforms, such as Microsoft Teams or Zoom.

**# M1 Project Defense**

For Master 1, the project defense of the first semester will be on Thursday of week 4, while the project defense of the second semester will be on Friday of week 25. Project defense can be online.

**# M2 Project Defense**

For Master 2, the project defense will be on Friday of week 4. Project defense can be online.

**# internship duration**

The internship duration in Master 2 should be 5 or 6 months. The earliest start date is February 1st, and the latest end date is August 31st.

**# internship defense**

Please, note that the defense can be either in July Session or in September session.

For July session, the defense takes place on Friday of week 26 for Session 1 and Friday of week 38 for September session.

**# Schedule**

Access to the class schedule is granted exclusively to enrolled students. A password will be provided by the administration.

The schedule for master 1 can be found at https://www.international-master-biometrics-intelligent-vision.org/schedule-master-1.

The schedule for master 2 can be found at https://www.international-master-biometrics-intelligent-vision.org/schedule-master-2.

**# Classes**

Standard class sessions usually run from 9:30 AM to 12:30 PM and from 1:30 PM to 4:30 PM. However, occasional deviations from the standard schedule may occur, with classes starting earlier or ending later.

Students should regularly check the online schedule for updates.

**# Important dates**

For each academic year, you can apply for this program from October 1st until June 30th (deadline). However, since the number of places is limited, it is highly recommended to apply early.

The master program start on Monday of week 39.

The first semester for master 1 (M1) and master 2 (M2) starts on Monday of week 39 until the last Friday of week 4.

The second semester for master 1 (M1) starts in week 6 until Friday of week 21.

For master 2 (M2), the second semester starts on week 5 until the internship defense.

For master 1 (M1), the project defense of the first semester will be on Thursday of week 4, while the project defense of the second semester will be on Friday of week 25.

For master 2 (M2), the project defense will be on Friday of week 4.

The project defense for master 2 (M2) program takes place on Friday of week 4. The internship defense takes place on Friday of week 26 for Session 1 and Friday of week 38 for Session 2.

In master 1 (M1) program, there is a project defense at the end of each semester.

**# Registration fees**

The total cost of the registration fee for this program, for both EU and Non-EU students, consists of two components: €92 for the Contribution à la Vie Étudiante et de Campus (CVEC) and €243 for registration fees. This fee must be paid for both Master 1 (M1) and Master 2 (M2).

The fees for this master's program are the same for both EU and Non-EU students.

The €243 registration fee can be paid in up to three installments.

**# Scholarships**

This master program itself does not provide funds or scholarships, but you can find information about possible scholarships at https:/[/www.en.u-pec.fr/en/student-life/before-your-](http://www.en.u-pec.fr/en/student-life/before-your-)arrival/scholarships-financial-assistance and https:[//www.campusfrance.org/en/bursaries-foreign-student](http://www.campusfrance.org/en/bursaries-foreign-students)s

**# Application process (abroad students)**

For international students currently residing abroad, the application process for studying in France and applying for the university is consisted of two phases. Begin your application by applying through the official portal: ”Etudes en France” at “<https://pastel.diplomatie.gouv.fr/etudesenfrance/dyn/public/authentification/login.html>” and then submit additional technical information through the official Master website at “https://www.international-master-biometrics-intelligent-vision.org/”

**# Application process (local students)**

For students currently living in France, or those who don’t need a Visa to enter France, they can directly apply through the official portal: ”E-candidat” at https://candidatures.u-pec.fr/ecandidat/#!accueilView, then submit additional technical information through the official Master website at https://www.international-master-biometrics-intelligent-vision.org/.

**# Application modes**

Whether you apply to this program as a potential online or on-campus student, the application procedure remains the same.

**# Application through Etude en France**

To easily locate our program on the "Etude en France" website, simply search using the keyword "I-BVI." This will direct you to our program listed under its French name, "International Biométrie et Vision Intelligente." Please note that the program is conducted in English.

**# Application deadline**

The application deadline is 30th of June. Any application after June 30th, will be considered for the next academic year.

**# Visa issue**

If you are experiencing visa issues, please inform us whether you will be joining the master's program. To avoid delays, note that you have the option to join the program online. For further assistance, please contact the administration.

**# Letters**

All requests for letters should be directed to the administration.

**# Checking the application result**

Applications are processed on the fly. If you want to check your application result, contact the administration to know the status of your application.

**# Registration process for onsite students**

To register for the program, whether Master 1 (M1) or Master 2 (M2), please follow these four steps:

1. Create a Personal Account & Pay the CVEC Contribution:

* Set up a personal account and pay the Student and Campus Life Contribution (CVEC) online using this link: <https://cvec.etudiant.gouv.fr/>. If you need more information on CVEC please check the PDF document provided at <https://www.campusfrance.org/system/files/medias/documents/2018-08/Proc%C3%A9dure%20CVEC_EN.pdf>.

1. Request a Paper Registration File:

* Collect a paper registration file from the reception desk at the Faculty of Sciences and Technology, Building P, at UPEC.

1. Complete the Registration File & attend the appointment:

* Fill out the registration file, including all required supporting documents.
* Attend your scheduled appointment at the SIOE, located in Building I of UPEC, to finalize your registration in person.

1. Access Your Digital Services Account:

* After completing your registration, you will receive an email containing a link to activate your digital services account securely.

If you need assistance with the French paper registration file, please contact the administration.

If you already have an INE number or a French diploma, you can complete the administrative registration process online.

**# Registration process for online students**

If you are supposed to attend the program online, please contact the administration to get the information about registration for online students.

**# Registration process for online students**

To get the information about registration for online students, please contact the administration.

**# Registration deadline**

Registration for new students who have never studied at a French university opens in September and ends on the last day of October.

**# certificates and diploma**

The official master's certificate is typically processed within 2-3 months after the completion of the program. Should you require documentation sooner, a temporary certificate can be issued upon request following the program's conclusion. Contact the administration for this purpose.

**# Grades and diploma**

For information about your grades and scores, please contact the administration at raphael.baudrand@u-pec.fr.

At the end of each semester, the master's program committee assesses and approves student results. The administration then updates transcripts or issues necessary certificates.

Upon successful completion of both semesters in M2, you will receive your final transcript and certificate. The official master's degree is processed within 2-3 months after the completion of the program.

**# Important contacts**

Professor Amine Nait-ali is the head and director of this master program.

To contact Professor Amine Nait-ali, you can email him at [naitali@u-pec.fr](mailto:naitali@u-pec.fr)

You can contact Professor Amine Nait-ali only if you didn’t receive a response from the administration.

The Administration / assistant / secretary of this master program is Raphael Baudrand-Chaudeyrac. To contact him you can send an email to [raphael.baudrand@u-pec.fr](mailto:raphael.baudrand@u-pec.fr) or call him on (+33)145171514 his office is at Faculty of Science and Technology, Building P2, room 031, Faculty of sciences and technology.

Mrs. Kania Gurmes is your contact only for internship agreements. To contact her, send an email to [kania.lal-gurmes@u-pec.fr](mailto:kania.lal-gurmes@u-pec.fr)

**# Resolving online connection problems**

If your Microsoft Teams account isn't working, try using your student email provided by UPEC. Ensure that your account is properly set up and that you have access to Microsoft Teams.

Make sure that the lecturers have added you to the group in Microsoft Teams. You might need to confirm this with them directly if you're not seeing the group in your account.

Check your notification settings in Microsoft Teams to make sure they are activated. This will enable you to receive updates and messages from your lecturers and groups.

**# PhD**

Our Master's program does not manage PhD programs. However, the head of the Master's program occasionally shares opportunities with students who are interested in pursuing PhD studies. These students can check for offers at various research labs, both in France and internationally. Additionally, opportunities can be found on websites such as Bernard Gregory or GDR websites. It's important to start exploring potential opportunities during your Master 2 (M2) internship to effectively plan for your future academic pursuits.

**# Recommendation Letter**

If you require a recommendation letter, please send an official request by email to the administration, which will coordinate with the head of the Master's program. Note that recommendation letters are only issued to students whose overall semester average is 12/20 or higher, and individual grades in Biometrics, Computer Vision, and Machine-Learning II must also exceed 12/20. Additionally, letters cannot be provided if your transcript is not yet available. Typically, it takes about one week to receive your letter. If you do not receive it within this timeframe, you are encouraged to send a reminder to the administration. Only one recommendation letter is provided.

**# Alumni**

Please contact the administration at raphael.baudrand@u-pec.fr, if you need information about Alumni.

**# IPSRS students**

PSRS students, or IPSRS (Intelligent Photonics for Security, Reliability, Sustainability, and Safety) students, are part of a group enrolled in a European joint Erasmus-Mundus Master's program. Funded by the European Commission, these students are selected for their excellence by a consortium that includes UPEC, UJM, UEF, Polito, and Vilnius University. They complete their first semester of M1 at UJM in Saint-Etienne, their second semester of M1 at UEF, and then move to UPEC to join the international Master's program in Biometrics and Intelligent Vision. Academically, there is no difference between these students and regular students in the program.

**# Erasmus students**

Don't confuse Erasmus students with Erasmus-Mundus students. Erasmus students join the international Master's program in Biometrics and Intelligent Vision for a single semester. Typically, they come from a European university and select a few courses from the program. Their study plan needs to be approved by the head of the Master's program. Erasmus candidates must contact the administration to confirm their academic path.

**# Staff**

Here is the list of the staff:

Name: Amine NAIT-ALI

Courses: Data capture and processing, Biometrics I, Biometrics II, AI and innovative workshops, Projets I, II and III

Email: [naitali@u-pec.fr](mailto:naitali@u-pec.fr)

Name: Régis Fournier

Courses: Data capture and processing

Email: [rfournier@u-pec.fr](mailto:rfournier@u-pec.fr)

Name: Laurent Chantelain

Courses: software integration I

Email: [laurent.chatelain@u-pec.fr](mailto:laurent.chatelain@u-pec.fr)

Name: Farnaz Majidzadeh

Courses: Pattern recognition

Email: [f.majidzadeh89@gmail.com](mailto:f.majidzadeh89@gmail.com)

Name: Bernard Frouin

Courses: English Communication, Ethics and privacy

Email: frouin@u-pec.fr

Name: Lise Dupont

Courses: Biosciences

Email: [lise.dupont@u-pec.fr](mailto:lise.dupont@u-pec.fr)

Name: Delhine Maugars

Courses: Machine-learning

Email: [delphine.maugars@u-pec.fr](mailto:delphine.maugars@u-pec.fr)

Name: Mohamad Khalil

Courses: Computer vision

Email: [mohamad.khalil.dr@gmail.com](mailto:mohamad.khalil.dr@gmail.com)

Name: Alexander Usotsev

Courses: Biometrics

Email: [usoltsev.av@gmail.com](mailto:usoltsev.av@gmail.com)

Name: Lahcen Aissa

Courses: Computer Vision

Email: [lahcene.aissa@gmail.com](mailto:lahcene.aissa@gmail.com)

Name: Hazem Zein

Courses: AI and innovative workshops, Software Integration II

Email: [hazemzein79.hz@gmail.com](mailto:hazemzein79.hz@gmail.com)

Name: Violeta Moskalu

Courses: Management methods

Email: [vmoskalu@gmail.com](mailto:vmoskalu@gmail.com)

Name: Jeanne Vézien

Course: Virtual and augmented reality

Email: vezien@limsi.fr

**# project I guidelines**

Project I of the 1st semester of M1 is to be completed individually. The objective is for students to demonstrate their skills in programming, integration, and visualization. Each student should select a single topic to focus on, which could be related to one of these topics:

* Signal Processing: e.g., speech, music, medical signals such as ECG, EEG.
* Data Processing: e.g., COVID-19 data analysis, financial data.
* Image Processing: e.g., medical images like X-rays, MRI scans, scene images, automobile images.

Students should develop an application primarily using Python, with the potential to integrate other technologies such as PHP and JavaScript, and consider using databases if required. The final application must be both professional in appearance and practically useful. Students are encouraged to integrate available libraries from platforms like GitHub and utilize public databases. All references and tools must be specified in the presentation slides (PPT).

Regular brainstorming sessions will be held where students can present the progress of their work. These sessions are crucial for receiving feedback and improving the quality of the projects. During these sessions, students should present two or three slides to remind their classmates of the project objectives and the tools they are using. Following this, students should spend a few minutes demonstrating the progress they have made on their project.

Students are evaluated based on their effort and the improvements they make over time. It is essential for students to take full advantage of these brainstorming sessions to refine their projects, gain insights, receive advice, and demonstrate their commitment to excellence.

For the defense, students will have 10 minutes to:

* Highlight the project objectives and solutions using PPt.
* Discuss the tools and technologies used.
* Provide a clear and concise demo of their application.

Students are responsible for balancing the time between the presentation and the demo. Materials (slides in PPT format and code in a ZIP file) must be submitted 24 hours on TEAMS  before the defense. No other formats will be accepted.

The final grade will be the average of three components:

1. Programming and Processing Level
2. Visualization Level
3. Communication Level

**# project II guidelines**

Project II of the 2nd semester of M1 is to be completed individually. The objective is for students to demonstrate their skills in advanced programming, computer vision, and machine learning. Each student should select a single topic to focus on, proposed by the director of the master's program. The proposed topics can be related to Development (D), Research (R), or Research and Development (R&D). Students should choose a topic based on their career objectives.

Development (D): Students selecting a Development project need to demonstrate their ability to develop a professional and useful application in the fields of computer vision and machine learning.

Research and Development (R&D): Students choosing R&D projects need to show advanced skills in both development and analysis through an application they develop. They should combine practical development with innovative research.

Research (R): Students focusing on Research projects need to exhibit critical thinking and the ability to implement recent approaches published in international journal articles. They should aim to contribute to the field with potential for publication.

For the defense, students will have 10 minutes to:

* Highlight the project objectives and solutions using PPT.
* Discuss the tools and technologies used.
* Provide a clear and concise demo of their application.

Students are responsible for balancing the time between the presentation and the demo. All materials (slides in PPT format and code in a ZIP file) must be submitted on TEAMS 24 hours before the defense. No other formats will be accepted.

* Research Projects: Students working on research topics must provide a research article along with the presentation materials. They do not need to design a user-friendly application.
* Research and Development (R&D) Projects: Students working on R&D topics must provide a functional application suitable for professional use, along with the presentation materials and a research-oriented analysis.
* Development (D) Projects: Students working on development topics must design a user-friendly application and submit the presentation materials.

**# project III guidelines**

Project III of the M2, 2nd semester, can be completed individually or in a group of two students. The topics are primarily continuations of the projects completed during the 2nd semester of M1. Students who did not attend M1 at UPEC, including Erasmus-Mundus students, can work on separate topics coordinated by the director of the master's program. The submission process follows the same steps as described for Project II.

**# Guidelines internship defense**

Students' supervisors will receive a request from the administration to provide feedback no later than one week before the defense day. Students are evaluated by their supervisors based on the following criteria: technical skills, professionalism and work ethic, initiative and proactiveness, teamwork and collaboration, communication skills, time management, and work habits such as punctuality and reliability.

Students must submit their report and their PPTs on TEAMS no later than 24 hours before the defense. If the report is confidential, this must be indicated on the cover in red color. On the day of the defense, students will have 10 minutes to present their work using PowerPoint slides, followed by a 5-minute question session. The company’s supervisor is welcome to attend the defense. All defense sessions will be conducted online.

After the defense, students are evaluated based on the quality of their presentation and the quality of their report. The final grades are averaged with the evaluation provided by their company supervisors. Students are allowed to attend their classmate’s defense, unless it’s confidential.

**# Guidelines for Preparing the Internship Document/Report**

Below, the guidelines for preparing the Internship Document/Report.

1. Abstract (half page): Provide a concise summary of your internship project, including its objectives and key findings.
2. Introduction: Give an overview of the document's structure and provide background information about your company and the purpose of your internship. This section should set the context for the rest of the document.
3. Chapter 1: Generalities: Introduce your company in more detail, including its background, industry, and any relevant information about its operations. Explain the specific purpose of your internship within the company and how it aligns with the company's goals. Provide references to support your information.
4. Chapter 2: State of the Art and Proposed Method(s): Discuss the existing knowledge and research related to the problem you addressed during your internship. Explain the current state of the field and the gaps or challenges that your internship aimed to address. Describe the method(s) you employed to solve the problem and provide references to support your approach.
5. Chapter 3: Results and Illustrations: Present the objective and clear results of your internship project. Include any data, statistics, or visualizations that support your findings. Explain the implications of your results and how they contribute to the field or the company's objectives. Provide references to relevant sources that validate your results.
6. Conclusion and Perspectives: Summarize the key findings and conclusions of your internship project. Reflect on the outcomes and discuss any limitations or areas for further research or improvement. Offer perspectives on potential future developments or applications of your work. This section should provide closure to your document and leave the reader with a clear understanding of your achievements and potential areas of growth.
7. References: List all the sources you cited throughout your document following a specific citation style (e.g., APA, MLA). Ensure that your references are properly formatted and include all necessary information for readers to locate the sources.

**# Additional Internship Guidelines**

Document Length: The recommended length for your document is typically around 30 pages, but it may vary based on your specific project and requirements.

Presentation Slides: Prepare PowerPoint slides for your presentation.

Submission Format: Submit a PDF version of your report.

Presentation Duration: Allocate 10 minutes for your presentation, followed by 5 minutes for questions.

Evaluation: Your final grade will be the average of three components: your report grade, your presentation grade, and your internship grade as evaluated by your supervisor.