



Rector's Decree No.722/2019

Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) academic years 2020/2022

CALL FOR APPLICATIONS

Art. 1 Description and Activation of the Masters

The Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET - <http://pixnet.santannapisa.it/what-is-pixnet/pixnet-next-intake-an-overview/>) EMJMD is a two-year programme (120 ECTS organised over 4 semesters) that aims to train talented students to become capable of designing, assembling and assessing innovative integrated devices based on photonic technologies. The set of learning outcomes includes an understanding of the theoretical design of the system/network device, the design and simulation of the device in terms of a photonic integrated circuit, the fabrication in a clean room facility, the packaging and the final testing of the prototypes (e.g. characterisation and demonstration in a relevant environment). More in detail, this EMJMD intends to be an inter-disciplinary, multi-national initiative to train young telecommunication and electrical engineers to investigate the adoption of Photonic Integrated Circuit (PIC) as the central element in the evolution of information and communication devices (e.g. Data Centres, mobile terminals, etc.).

The next edition of the two-year PIXNET Master's will start in the academic year 2020/2021 and will take place in the buildings and relevant laboratories of the universities involved, starting in September/October 2020 and ending in August/September 2022.

The initiative is structured into two main patterns: an **international path**, under the Erasmus + Programme and a **local one**, which will develop exclusively in Italy at the Scuola Superiore Sant'Anna.

The evolution of the Brexit situation may affect the activation of the PIXNET Programme – international path, depending on whether the UK and the EU finalise an agreement covering EMJMD initiatives funded by EACEA¹. Brexit may affect UK-national student status, mobility paths to UK institutions and Consortium composition.

¹ According to the European Commission “Note to coordinators of all Erasmus Mundus Joint Programmes, which include a UK HEI as a full member of the Consortium” - Ref. Ares(2019)5830841 - 18/09/2019: ‘for programmes offered to student intakes who start their programme after the date of a no-deal Brexit, UK HEIs will be able to continue to take part in consortia, but their status will change to a Partner-Country institution. Consortia will therefore



The PIXNET Consortium continues to monitor the situation closely and, where possible, will take those actions it considers useful in order to mitigate any risks emerging from the potential different scenarios. The Consortium will continue to provide notifications via the PIXNET website whenever necessary about the impact of Brexit evolution on the activation of the forthcoming PIXNET intake.

The **PIXNET Erasmus Mundus Joint Master Degree (EMJMD) international path** of the Master's develops in the framework of the Erasmus+ programme. The PIXNET Master's has been selected by the European Commission within the framework of the Erasmus+ programme Call for proposals 2017 (EAC/A03/2016), as part of Key Action 1 – Erasmus Mundus Joint Masters Degrees 2017. The Master's is jointly run by a Consortium of four universities: Scuola Superiore Sant'Anna (SSSA), as project coordinator, along with Technische Universiteit Eindhoven (TUE), The Netherlands; Aston University (ASTON), United Kingdom; and Osaka University (OSAKA). A large number of associated (industrial) partners are also involved in the programme. The three European partners (SSSA, TUE and ASTON) will provide three fabrication facilities for photonic technologies (Inphotec at SSSA, NanoLab at TUE and 3D-Femtoinscription Lab at ASTON).

The international path includes a mandatory student mobility component in at least two of the participating Programme country institutions of the PIXNET Consortium. Each of these mandatory mobility periods must include a volume of study/research or equivalent (e.g. internship, thesis preparation) corresponding to at least 30 ECTS. The mandatory mobility periods cannot be replaced by virtual mobility neither can they take place in institutions outside the PIXNET consortium.

The present call for applications adheres to the guidelines as established in the most recent version of the Erasmus+ Programme Guide, available at: https://ec.europa.eu/programmes/erasmus-plus/resources/programme-guide_en

The **PIXNET local path** consists of a University Masters – 1st level diploma and it is offered entirely by Scuola Superiore Sant'Anna along the academic years 2020/21 and 2021/22, in accordance with Art. 3 of the School Charter. The Master's takes place at the Institute of Communication, Information and Perception Technologies (hereafter “TeCIP”) – of the Scuola Superiore Sant'Anna, Pisa.

Art. 2 **Aims**

The educational goal of PIXNET is to combine the advanced training objectives in the area of innovation at the system and network level, with the emerging competence of designing and implementing photonic integrated circuits and networks. These disciplines have worked in a disjointed way in the past, but, most research and market demands point to the need for photonic integrated solutions to meet future requirements in terms of integration into consumer appliances (e.g. multi-core CPU, sensors, network devices, etc.). In particular, the system-level design provides the necessary specifications for a communication system or network to operate properly within a given environment, while the integrated technology capability affects the design phase in terms of what is currently feasible from the perspective of photonic integration.

need to consider the way both their consortium and their programme are structured in the light of a number of EMJMD provisions' such as 'The minimum EMJMD consortium requires three HEIs from different Programme Countries.'



The international aspect of the PIXNET joint programme renders participating institutions reciprocal benefits in the areas of methodology, content development and knowledge exchange. As photonic and integrated network technologies mature, their importance will continue to grow. PIXNET exploits a significant complementarity of the expertise of the Consortium partners, as well as well-defined mobility paths, which bring practical and specific competences to the perspective students. All partners have strong expertise in optical communication theory and techniques and extensive system and network experimental facilities. Three of them (SSSA, TUE and ASTON) have fabrication facilities for photonic integrated circuits and networks for device prototyping. The structure of the proposed Master's provides benefits in terms of the specific expertise available in the various institutions, reflected in the specific combination and integration of courses offered, as well as in terms of the enrichment of the personal student experience in an international environment. This is relevant to the specific field of activity, as the working context in the field of photonic networks and technologies will be more and more global in nature.

Art. 3 Master's Structure and Organisation

The Master's Study programme, in both local and international patterns, consists of **four semesters**. 30 ECTS can be secured in each semester, amounting to a total of 120 ECTS. The first three semesters are based on traditional courses, laboratory exercise and sessions, while the final semester is based on independent work related to the Master's thesis.

Participation in courses is **compulsory** and student attendance is monitored. Students will not be allowed to miss more than 20% of the courses in each of the institutions. At the end of each course, students will undergo an achievement evaluation test, which will lead to the attainment of the corresponding credits. This test will be organised at the discretion of the responsible instructor as a written or oral exam, the submission of a project, practical laboratory tests, or a combination of all of these evaluation methods.

The **PIXNET Erasmus Mundus Joint Master Degree (EMJMD) international path** develops in the premises of the participating institutions of the PIXNET Erasmus Mundus Consortium. Different mobility paths are envisioned depending on the curriculum selected and the modules taken by the prospective students. An overview of the mobility paths and training program is available at <http://pixnet.santannapisa.it/study/mobility-paths/> and the visited institutions are reported in Table 1.²

	1 st semester	2 nd semester	3 rd semester	4 th semester	Multiple degrees
Mobility path #1 – Curriculum “Optical Switching Technologies”	SSSA	SSSA	TUE	TUE	SSSA-TUE
Mobility path #2 – Curriculum “Optical Transceiver Technologies”	ASTON	ASTON	TUE	TUE	ASTON-TUE
Mobility path #3 – Curriculum “Design of Photonic Integrated Devices”	SSSA	SSSA	ASTON	ASTON	SSSA-ASTON
Mobility path #4 – Curriculum “Photonic Integrated Devices Manufacturing”	ASTON	ASTON	SSSA	SSSA	ASTON-SSSA

² Mobility paths including the UK institution (Aston University) may be subject to changes or replacement depending on the outcome of the Brexit deal, under which the UK may become a ‘partner’ country institution.



Mobility path #5 – Curriculum “Theory and Techniques for Photonic Integrated Devices”	ASTON	ASTON	OSAKA	SSSA	SSSA-ASTON-OSAKA
Mobility path #6 – Curriculum “Theory and Techniques for Photonic Integrated Devices”	SSSA	SSSA	ASTON	OSAKA	SSSA-ASTON

Table 1. Mobility Paths

The first year of the Master’s (i.e. the first and second semester of the Master’s course) will cover basic subjects and provide a solid background from which to face the second year. Each institution provides a different selection of courses in the first year in order to allow students to match them to their prior knowledge and preferences. The final year consists of more specialist courses, culminating in a six-month research project. The third semester will cover specialisation courses in view of the independent project developed during the last semester of the programme and which will be reported in the Master’s thesis.

The Master’s study programme and the details of the modules offered in the four participating institutions are available at: <http://pixnet.santannapisa.it/study/mobility-paths/>. Students will be subject to the local rules of each of the hosting institutions, regarding in particular the local policies on exams and available attempts for students.

The students must express the preference order regarding all of the six available mobility paths (PIXNET curricula) at the time of application. His or her specified preference will be used to assign the best mobility option available for each selected applicant, based on his/her ranking, as specified in Art. 8.

The **PIXNET local path** takes place entirely at the Scuola Superiore Sant’Anna (Pisa, Italy) and its classes will be shared with those students following the international path. The first three semesters consist of 900 hours (90 ECTS) of class lectures and lab training and are propaedeutic to the last semester. The objective of this first period is the transmission of competences through front teaching, lab training, stand-alone review of material and specialised seminars by universities and industry-representative researchers. The entire training programme at the Scuola Superiore Sant’Anna for the first three semesters is available at the following link: <http://pixnet.santannapisa.it/pixnet-local-path/local-path-at-scuola-santanna/>.

The fourth (and final) semester envisions the original development and relevant preparation of a written dissertation (Master’s thesis) developed in the laboratories of the TeCIP Institute. This period has the scope to complement the in-class training with an operative direct experience, in which the competence acquired during the previous three semesters can be efficiently exercised. The Master’s thesis may also be developed in the laboratories of associated partners. The Master’s thesis has an overall duration of approximately 750 hours and provides up to 30 ECTS. The course portfolio of the PIXNET Master’s local path constitutes the set of courses that can be taken during the sojourn at the Scuola Superiore Sant’Anna within the framework of the PIXNET Erasmus Mundus international path.



Art. 4 Degrees Awarded

Those students who successfully complete, having attended at least 80% of the teaching programme, the **PIXNET Erasmus Mundus Joint Master Degree (EMJMD) international path** will receive double or triple degrees (i.e. two or three national diplomas issued by two or three institutions of the Consortium) depending on the mobility path (curriculum) assigned after the selection process. Each institution will be responsible for the issuing of the title it awards. Hence, the institutions of the Consortium will release national degrees and reciprocally recognise any teaching module attended in the other institutions. A single Diploma Supplement released by the Consortium, which describes the educational mobility program followed by the student, will accompany awarded degrees. Table 2 details the title of the degrees awarded within the PIXNET Programme, according to the issuing institution:

Name of institution	Title of degree awarded
Scuola Superiore Sant'Anna	Masters diploma on Photonic Integrated Circuits, Sensors and NETworks
Technische Universiteit Eindhoven	Master of Science in Electrical Engineering
Aston University	Masters of Science in Photonic Integrated Circuits, Sensors and NETworks
Osaka University	Master of Engineering

Table 2. Degrees Awarded

The double or triple **Masters Degrees awarded within the PIXNET Erasmus Mundus international path** are valid as a qualification to gain access to a PhD program.

Successful completion of **PIXNET local path** entitles students, who have attended at least 80% of the entire teaching programme and who have gained the 120 ECTS as stated in Art.3, to receive, from the Scuola Superiore Sant'Anna, a **University Master's – 1st level diploma**, stating the gained University credits, in accordance with art. 3 of D.M. 207/2004. **This Master's Diploma does not allow access to PhD** and to 3rd cycle programmes, since this type of course does not belong to the general requirements established at national level, but it is offered under the autonomous responsibility of the SSSA university.

Art. 5 Admission Requirements

All applicants must have a **Bachelor's degree**, corresponding to at least 180 ECTS, in **Electrical Engineering, Electronics, Telecommunication Engineering, Physics**, or other related scientific areas, which will be evaluated on a case by case basis by the Selection Committee. 'Programme country' applicants (see notes for definition) who expect to gain such qualifications **within July 31st, 2020** are also eligible, and if selected, are admitted 'subject to reservation'.

The general requirements for admission are:

- A relevant **Bachelor's degree** (or equivalent), based on a program of sufficient academic level and quality to be able to complete the PIXNET Master's programme. Degrees will be evaluated on a case by case basis by the Selection Committee. Some of the specific



requirements per country can be found at: <https://www.tue.nl/en/education/become-a-tue-student/admission-and-enrollment/>

- A **Cumulative Grade Point Average (CGPA)** of at **least 75%** of the scale maximum.
- One of the following condition can satisfy the requirement regarding knowledge of English³:
 - The status of native speaker of English
 - **IELTS certificate or TOEFL, exclusively Internet Based Test** (please read carefully the threshold of scores per institution as provided in the footnote⁴)

The language test results must be valid until June 2021.

Proof of having successfully completed a prior study program (Bachelor, Master) where English is the **official medium of instruction will be not accepted** anymore.

Prospective students **must possess all requirements before the submission deadline**, as stated in the following Art. 9.

Art. 6 Scholarships available for EMJMD applicants

In the framework of the **PIXNET Erasmus Mundus Joint Master Degree (EMJMD) international path**, Programme and Partner-country applicants can apply for an Erasmus Mundus scholarship in accordance with the criteria of the Erasmus⁺ Programme. The application procedure and scholarships available differ depending on whether an applicant is a “**Programme-Country**” or a “**Partner-country**”⁵ student.

The Erasmus Mundus programme provides for PIXNET different types of scholarships, as follows:

PARTNER COUNTRY Scholarships: full-study scholarship covering all necessary costs during the study course period for “Partner-country” students. Within this category, PIXNET has scholarships reserved for applicants with citizenship of the following **targeted regions – geographical window**:

³ Actual Requirements at time of visa issue may vary or be subject to the discretion of relevant authorities.

⁴ IELTS and TOEFL overall and minimum scores may differ from each hosting institutions. Please consult the following links for your reference: <https://www.tue.nl/en/education/become-a-tue-student/admission-and-enrollment/language-proficiency-requirements/> and <https://www2.aston.ac.uk/international-students/english-language-requirements/index>. Scuola Sant’Anna and Osaka University do not require minimum IELTS/TOEFL scores. Candidates providing certificates with scores below thresholds will not be admitted to the programme or to a specific mobility path.

⁵ **PROGRAMME COUNTRIES.** *Member States of the European Union (EU):* Austria, Belgium, Bulgaria, Cyprus, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom
Non EU Programme Countries: North Macedonia, Iceland, Liechtenstein, Norway, Turkey.

PARTNER COUNTRIES: are any other country of the world. Students who are not residents nor have carried out their main activity (studies, training or work) for more than a total of 12 months over the last five years in a Programme Country. The five-year reference period for this 12-month rule is calculated backwards as from the submission deadline defined by the Consortium of applying for a EMJMD student scholars. Students with a Partner Country citizenship who do not fulfil the Partner Country criteria defined above (12-months rule) count as Programme Country students.



- **Asia – Less Developed Countries** (Afghanistan, Bangladesh, Bhutan, Cambodia, Laos, Myanmar, Nepal);
- **Latin America – Remaining Countries** (Argentina, Chile, Colombia, Costa Rica, Cuba, Ecuador, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela).

PROGRAMME COUNTRY Scholarships: financial contribution to those students that do not fall within the “Partner-country” applicant definition. *Id est*, 28 EU Member States students⁶, EEA-EFTA States students and third-country students that have been residents of, or carried out their main activities (studies, work, etc.) in, any of the below-mentioned countries for more than a total of 12 months over the last five years.

EMJMD student scholarships cover the entire duration of the Master course and are awarded exclusively for a full-time enrolment in the 2020-22 PIXNET third intake.

Notification of the awarding of one of the above-mentioned scholarships to an applicant, along with the admission to the Master’s, will be done, as established in art. 9, **via e-mail only** (it will be used the email provided in the application form). Any communication regarding this call must be transmitted exclusively via e-mail to pixnet@santannapisa.it.

Table 3 summarises the financial provision for EMJMD scholarship holders⁷:

<i>Contribution</i>	<i>Description</i>	<i>Partner Country</i>	<i>Programme Country</i>
<i>n. 1</i>	<i>Maximum EC contribution to the Masters participation costs (tuitions, insurance, coverage, ...)</i>	€ 9.000,00 / year	€ 4.500,00 / year
<i>n. 2</i>	<i>Contribution to the travel and installation costs</i>	€1.000,00 / year per scholarship holder resident in a programme country for travel costs <i>or</i> € 2.000,00 / year for travel costs + € 1.000,00 for installation costs for a scholarship holder, resident in a Partner Country less than 4000 Km from the EMJMD coordinating HEI . <i>or</i> € 3.000,00 / year for travel costs + € 1.000,00 for installation costs for a scholarship holder, resident in a Partner Country 4000 Km or more from the EMJMD coordinating HEI .	
<i>n. 3</i>	<i>Contribution to subsistence cost</i>	€ 1.000,00 / month for the entire duration of the EMJMD study programme (24 months maximum). Contribution to subsistence costs will not be given to the scholarship holders for the EMJMD periods (study/research/placement/thesis preparation) spent in their country of residence, nor to scholarship holders from a Partner Country for the EMJMD periods exceeding one trimester (i.e. 3 months or the equivalent of 15 ECTS credits) spent in any Partner Country.	

⁶ The status of UK nationals may change depending on the Brexit deal outcome.

⁷ The contribution for ‘travel and installation cost’ takes into account only the residence of the scholarship holder, regardless of the category under which the student has been enrolled.



TOTAL for the 2-year EMJMD	<p>Students resident in a Programme country: maximum € 35.000,00;</p> <p>Students resident less than 4.000 Km from coordinating HEI: maximum € 47.000,00;</p> <p>Students resident more than 4.000 Km from coordinating HEI: maximum € 49.000,00;</p> <p>The Consortium will use the "Distance calculator" available on the following Erasmus+ website: http://ec.europa.eu/programmes/erasmus-plus/tools/distance_en.htm in order to calculate the travel distances from the scholarship holder city of residence to the city of the coordinating HEI, and to decide the distance band (unit cost) applicable to scholarship holders</p>
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Table 3. Erasmus Mundus Joint Master Degree Student Scholarship

Students who have already obtained an EMJMD scholarship or are former Erasmus Mundus Master/Doctoral scholarship holders are not eligible for an additional scholarship under the EMJMD action. Students benefiting from an EMJMD scholarship cannot benefit from another EU grant while pursuing their EMJMD studies. An EMJMD scholarship holder may receive additional funding for study/research activities as long as these are not from other EU funding sources/programmes.

Art. 7

Scholarships available for LOCAL path applicants

In the framework of the **PIXNET local path**, in order to encourage the participation of deserving applicants, the TeCIP Institute makes **one scholarship** available for the first year of the Programme, reserved to the first-ranked applicants in the Local-path applicant list.

The scholarship covers the annual tuition fee to the Master's (including national health and accident insurance), and provides a support of an annual support of € 6.000,00 for the board and lodging of the awarded student. For the second year of the Master's Programme, the TeCIP Institute makes available one scholarship reserved to the student who registers the best academic performance in the first academic year. The scholarship offers the same benefits as that of the first year grant.

Art. 8

Application Procedure for Students

All Applicants to the local and international paths must enter their application **exclusively on-line** (<http://pixnet.santannapisa.it/apply/apply-here/>), following the instructions at <http://pixnet.santannapisa.it/apply/application-procedure/>.

Applicants must first make a choice regarding one or more of the types of application they want to pursue:

- EMJMD international path with scholarship: partner-country candidates
- EMJMD international path with scholarship: programme-country candidates
- Self-funded: international path without scholarship partner and programme-country candidates
- Local path



In each application, candidates should provide the following information:

- surname; forename; place/country and date of birth; citizenship(s)⁸; gender; disabilities;
- permanent address and mail address (if different), where applicants wish to receive paper communications concerning the application; phone, e-mail and skype contacts;
- University career: academic title, degree-award date, university and final score (if applicable), academic year of beginning of BSc's studies, standard duration of courses, weighted average score of exams taken. Programme country applicants who expect to graduate within July 31st, 2020 must indicate the provisional average and date of these achievements;
- level of knowledge of the English language and other foreign languages;
- commitment to notify any change of address or e-mail contact to the Master's Secretariat;

For the PIXNET Erasmus Mundus international path only, applicants must also enter the following information:

- **preference order of the six possible mobility paths** (curricula). This is a **compulsory requirement**: applicants must provide their preferred mobility paths in order of preference, where the 1st is the most-preferred option and the 6th the least-preferred. No mobility repetitions are accepted;
- request for an Erasmus Mundus scholarship and corresponding category, according to the European Commission criteria, as reported in Art.6, and declaration from the candidate that the relevant eligibility criteria are fulfilled⁹;
- declaration of knowledge of selection criteria, procedure and timetable;
- declaration on **EMJMD number of applications threshold** (applicants declare their awareness that for a given academic year the number of applications for an EMJMD scholarship to any of the Erasmus + courses **must be limited to maximum three** different joint programmes).

Applicants must upload in the application (all materials must be in **Adobe pdf format** and must use the **file-name nomenclature** shown):

- **Curriculum Vitae_Surname_Name.pdf**: signed curriculum vitae in English (European format - <https://europass.cedefop.europa.eu/editors/en/cv/compose>) covering the educational background, cultural and professional experience and all other information that might help in the evaluation of the candidate;

⁸ Candidates with multiple nationality must decide at application stage under which nationality they apply.

⁹ Nationality and residence, 12-month residence rule (see following note), non EMMC (Erasmus Mundus – Action 1) and/or EMJMD scholarship holder previously etc.



- **Questionnaire_Surname_Name.pdf:** form to be filled compulsorily by applicants regarding key information, details on their career and preferences within the PIXNET programme (to be downloaded for relevant category at: <http://pixnet.santannapisa.it/apply/apply-here/>);
- **Residence_Surname_Name.pdf:** a valid Certificate of Residence recording where the candidate is currently living as a legal resident. There must be clearly reported his/her home address and town/city. A local authority must issue it. Documents provided must have been issued within 12 months before the submission deadline of the application. Such a certificate is mandatory to prove that candidate belongs to the Programme or Partner category and it will be used to calculate the scholarship amount.
- **Degree_Surname_Name.pdf:** certified copy of Degree Certificate (if applicable) translated in English;
- **Transcripts_Surname_Name.pdf:** certified academic records and transcripts, reporting the final grade and grades earned in individual exams, translated in English. The transcript must clearly report the scale and/or criteria used for the exam evaluation; acronyms must be clearly specified;
- **English_Language_Surname_name.pdf:** English proficiency certificate (TOEFL, IELTS, native status);
- **Motivation_Surname_Name.pdf:** motivation letter;
- **References_Surname_Name.pdf:** two reference letters or Testimonial of Experience (i.e. internship certificates, training attestations; supervisor's e-mail testimony in PDF format; etc...);
- **Passport_Surname_Name.pdf:** copy of main page(s) of passport for proof of nationality;
- **GRE_Surname_Name.pdf:** (optional) Copy of GRE results if available;
- **Other_Documents_Surname_Name.pdf:** any other useful documentation for the assessment.

Applications with missing information will not be considered valid. No additions are allowed after the application deadline. Any request from the PIXNET Secretariat for the completion of application documents must be satisfied within the date indicated in the notification e-mail sent by the Secretariat itself.

Applications must be submitted according to the deadlines provided in Art. 9. Applications received after the deadline or submitted on a form other than the form indicated in this article, for whatever reason, will not be considered.



Falsification of documents and fraudulent statements are punished in accordance with the Italian Criminal Code and the special applicable laws, Art. 75 and Art. 76 of Presidential Decree (D.P.R.) No. 445/2000. Scuola Superiore Sant'Anna may monitor the truthfulness of the statements provided and the documents submitted, at any time during the procedure, even after the Master's Programme has started, and may request submission of the original documents. In the case of false statements, Scuola Superiore Sant'Anna may decide, at any time, to exclude the candidates from the selection procedure or from the Master's Programme, based on a motivated decision issued by the Rector, without prejudice to the any resulting criminal liability.

Art. 9 Deadlines

All applications to the PIXNET Masters and scholarships must be submitted according to the requirements and procedures established in Art. 5, 6, 7 and 8, by the following deadlines:

PIXNET Erasmus Mundus international path applicants

- applying for a *Partner Country* scholarship: **5th March 2020** (11.59 am Italian Local Time);
- applying for a *Programme Country* scholarship: **17th March 2020** (11.59 am Italian Local Time);
- applying without scholarship: **7th April 2020** (11.59 am Italian Local Time);

PIXNET local path: **7th April 2020** (11.59 am Italian Local Time).

Art. 10 Student Selection Process and Scholarship Awarding

A specifically appointed Selection Committee will select candidates by rating them using a scale with a **maximum score of 100** points, divided as follows:

- **study curriculum** (average mark of all university exams, thesis mark, relevance of the curriculum and dissertation thesis to the Masters programme), up to 70 points;
- **previous** professional and/or research **experience** in the sector, up to 10 points;
- level of **language skills** (mainly English and other languages), up to 10 points;
- motivation and **reference letters**, up to 10 points;

The educational qualifications gained at a foreign University or a foreign University Institute are assessed by the Selection Committee that reserves the right to request possible supplementary documents/information.



In order to clarify some aspects of the received applications, the Selection Committee **may require** to selected applicants **to attend an online interview** (e.g. via skype). Applicants who are required to attend an interview will be notified only via e-mail.

Those applicants **awarded an overall score of at least 70/100 points are eligible** to be admitted to attend the Master's Programme. Four ranking lists will be provided as detailed next.

For the **PIXNET Erasmus Mundus Joint Master Degree (EMJMD) international path**, the Consortium will appoint a Selection Committee including representative of the four academic partners. All candidates applying for an Erasmus Mundus scholarship will undergo a multiple evaluation.

A first ranking list (n.1) will be provided for the awarding of the "Partner Country" Scholarships. Students eligible for a specific "geographical window" must be included under the Partner Country list.

A second ranking list (n.2) will be provided for the awarding of the "Programme Country" Scholarships.

Both ranking list (n. 1 and n. 2), along with their respective reserve lists will be officially posted on the PIXNET website. The total number of scholarship for the intake beginning in the academic year 2020-21 is the following:

Programme Country Students

- 5 full EM Scholarships
- 2 first year tuition waiver in curricula 1 and 2
- 1 full tuition waiver in curriculum 6

Partner Country Students

- 15 full EM Scholarships, out of which up to 2 are for candidates of targeted regions as mentioned in Art. 6
- 1 full tuition waiver in curriculum 4

Assignment of the scholarship follows the preference rank provided by the students, while respecting a country balance criterion (i.e. no more than three scholarship holders should come from the same country¹⁰) and an institution/mobility balance criterion according to the provisional figures provided in Table 4. These figures may be subject to variations, depending on hosting institution availabilities and student application; in particular, the English proficiency requirements (see Art. 5)¹¹.

¹⁰ This rule applies "per Category" and the geographical windows are considered separate categories. This means that a Consortium can include, for instance, three Brazilian candidates on its main list for Partner Country students, another one in the "Latin America – Region 8" window (if applicable), and another three – should they have resided for more than a total of 12 months in any of the Programme Countries during the last 5 years – under the Programme Country main list of students.

¹¹ Mobility paths may change, depending on the outcome of the Brexit situation. As a consequence, the composition of the Consortium may change with the inclusion of an additional partner.



TABLE 4 - Allotment of scholarships over the mobility paths

Mobility Paths						Programme Country		Partner Country	
Mobility #	1 sem.	2 sem.	3 sem.	4 sem.	Degree	EM Scholarship	Tuition waiver	EM Scholarship	Tuition waiver
mob1	SSSA	SSSA	TUE	TUE	SSSA-TUE	1	1*	2	
mob2	ASTON	ASTON	TUE	TUE	ASTON-TUE	1	1*		
mob3	SSSA	SSSA	ASTON	ASTON	SSSA-ASTON			1	
mob4	ASTON	ASTON	SSSA	SSSA	ASTON-SSSA	1		3	1**
mob5	ASTON	ASTON	OSAKA	SSSA	SSSA-ASTON-OSAKA	1		2	
mob6	SSSA	SSSA	ASTON	OSAKA	SSSA-ASTON	1	1***	7	
TOTAL # of scholarships						5	3	15	1

* tuition waiver by SSSA or ASTON only

** tuition waiver by SSSA and ASTON

*** tuition waiver by SSSA, ASTON and OSAKA

Additional tuition waiver positions may be assigned following the final ranking list after the selection is closed and subject to the availability of additional funding.

Eligible candidates will be offered a scholarship bound to a mobility path (curriculum), according to their ranking position and corresponding preferences. Positions with tuition waiver will be offered to selected applicants ranked immediately after scholarship holders in the mobility paths where this opportunity is available.

A third ranking list (n. 3) will be provided for admission of students within the international path without Erasmus Mundus scholarships. The total number of available position for the international path without scholarship:

- 4 positions for Programme country candidates on any of the curricula
- 6 positions for Partner country candidates (one position per curriculum)

EM Scholarship applicants above the eligibility threshold (70/100), but ranked in a position such that they are not eligible for an Erasmus Mundus scholarship or a tuition waiver, will be re-considered for admission without scholarship in ranking list n. 3 **only if** they have submitted the application under the section “PIXNET Erasmus Mundus international path without scholarship” also.

For the **PIXNET local path**, a Selection Committee, appointed by the Scuola Superiore Sant’Anna, reviews the certificates and curriculum vitae of each candidate applying for the PIXNET Masters local path.

A fourth ranking list (n.4) will be provided in the framework of the PIXNET local path based on the applications received for the awarding of the scholarship and the participation without it. The total number of admitted students cannot exceed 20.



At the end of each selection procedures, according to the deadlines provided in Art. 9, the Selection Committees will post on the PIXNET website the list of admitted applicants to the Masters. The website will contain the four ranking lists as detailed above. The results of the selection will be timely notified to applicants via e-mail only.

Art. 11 Tuition fees

PIXNET Erasmus Mundus international path

Tuition fees differ depending on whether an applicant is considered a “Programme-country” or a “Partner-country” student:

- Programme-Country: € 4.500,00 per year
- Partner-country: € 9.000,00 per year

Recipients of an Erasmus Mundus scholarship, either as a Programme-country student or a Partner-country student, will have the fees covered and automatically deducted from the Contribution n. 1 (as per Art. 6) of the scholarship.

PIXNET local path

Tuition fees are set to € 1.500,00 per semester (inclusive of lecture attendance, educational materials and tutorship during Master’s thesis preparation). The logistics and travel expenses are to be borne by each participant. The Scuola Superiore Sant'Anna will provide health and accident insurance for the entire period of the Master’s.

The students receiving the scholarship by the Scuola Superiore Sant'Anna specified in Art. 7 will benefit from a tuition fee waiver and an annual contribution of € 6.000,00 for board and lodging provided by Scuola Superiore Sant’Anna.

Art. 12 Rights and Duties of the Students

The rights and duties of the students of the Masters Programme in its International Erasmus Mundus path, as well as the relations between the students and the participating institution facilities, are regulated by a specific “Student Agreement” duly signed by the student and a representative of one of the participating institutions. Students will be subject to the local rules of each of the hosting institutions.

The rights and duties of the students of the Masters Programme in its local path, as well as the relations between the students and the Scuola Superiore Sant'Anna facilities, are regulated by the General Rules and Regulations for University Master – 1nd level diploma of the Scuola Superiore Sant’Anna and by the Rules and Regulations of the “Masters on Photonic Integrated Circuits, Sensors and NETworks – local path”.



Art. 13 Enrolment and tuition fee payment

The admitted applicants who wish to attend the Masters Programme must provide confirmation of their acceptance. To confirm, they must send the following documents to the Scuola Superiore Sant'Anna via e-mail (pixnet@santannapisa.it), **within 4 days of reception** of the admission communication, which will be sent via email as established in Art. 10:

- a) Confirmation of attendance at the Master's Programme, signed by the admitted applicant;
- b) Signed copy of the Student Agreement (international Erasmus Mundus path) or Scuola Superiore Sant'Anna Rules and Regulations of the "Masters on Photonic Integrated Circuits, Sensors and NETWORKS – local path";
- c) Valid copy of passport;
- d) Any other documents required in the admission communication (i.e. a copy of the enrolment fee payment if required).

Failure or delay in the delivery of confirmation within the specified deadline is equivalent to a renunciation and will cause the reassignment of the position and/or scholarship to the next eligible candidate.

Those admitted "subject to reservation" Programme -country applicants enrolled in a Bachelor's Degree Course, as per Art. 5, who expect to graduate within July 31st, 2020, are required to submit a certificate of the attained university degree/ECTS, under penalty of exclusion, by the given date.

Tuition payment method:

1. for students with an Erasmus Mundus scholarship: fees will be directly withheld from the scholarship Contribution 1 (see Art. 6 – Scholarships for Students) according to the student nationality - whether the applicant is considered as being from a "Programme-country" or from a "Partner-country";
2. for students applying for the international path without an Erasmus Mundus scholarship: by bank transfer to the Scuola Superiore Sant'Anna bank account, which will be communicated to the candidates in the admission letter;
3. for students applying for the local path without a scholarship: by bank transfer to the Scuola Superiore Sant'Anna bank account, which will be communicated to the candidates in the admission letter.

Applicants selected for a scholarship must inform the Scuola Superiore Sant'Anna of their bank details in order to receive the scholarship payments as established by the European Commission provisions¹² for the international path.

¹² Contribution 2 (Contribution to student's travel and installation costs): *Contribution to travel costs*: shall be paid the full amount for year 1 upon arrival at the first host institution, and the full amount for year 2 upon beginning of the third



In the event of any student withdrawing from or dropping out of the Programme, subsequent to having given confirmation of attendance, he/she shall not be paid back any amount. Moreover, he/she shall still be bound to pay any fees payable up to the time of withdrawal.

The Scuola Superiore Sant'Anna and the PIXNET participating institutions, as specifically ruled in the “Student Agreement”, may decide to stop the monthly payment in the case that the student does not regularly attend classes or does not respect the study plan agreed with the academic advisor. The student must pay back parts or the total amount of the grant in case of cancellation or discontinuation of the programme.

Successful candidates holding academic qualifications obtained abroad are required to submit the following documentation by the deadline indicated to confirm attendance, in addition to the documentation referred to in the preceding paragraph:

- a copy of the original degree translated and authenticated by the competent Italian Diplomatic Authorities of the country in which the institution that issued the educational qualification is located, if the language differs from English/French/Spanish/German;
- CIMEA certificate, as from CIMEA website <http://www.cimea.it/en/servizi/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-di-verifica-dei-titoli-diplome.aspx> or a “Declaration of Value” of the educational qualification obtained abroad issued by the competent Italian diplomatic or consular representations of the country in which the educational qualification was obtained;
- a certificate with a list of the examinations taken translated and authenticated by the same authorities.

At the beginning of the educational activities at Scuola Superiore Sant’Anna, all students are required to submit to the School Administration Office a revenue stamp with a value of € 16.00 to be affixed to the admission application in order to officialise the attendance at the Master’s Programme.

Pursuant to art. 9, paragraph 2 of Legislative Decree No. 68/2012 Scuola Superiore Sant’Anna grants total exemption regarding payment of the enrolment fee in the case of students with disabilities, acknowledged to be equal to or greater than sixty-six percent, in accordance with art. 3, paragraph 1 of Law No. 104/1992, and applies a 1.5% reduction for every percentage point of disability in the case of students who have been acknowledged a disability of less than 36% percent. A student that intends to take advantage of the exemption or the reduction is required to attach an appropriate certificate to the online application.

semester. *Installation costs*: shall be paid in full upon arrival at the first host institution of the student resident in a Partner Country.

Contribution 3 (*Contribution to subsistence cost*): transferred on a monthly basis (up to the maximum of 24 instalments) into the student’s personal bank account. The monthly allowance can only be paid as from the month of arrival of the student at the first host Institution and after formal enrolment to the course. If students decide to voluntarily join the programme at an earlier stage, then this period must not be considered as part of the EMJMD’s course duration. This rule also applies to cases of late arrivals of students to the course.



Art. 14

Person responsible for the competitive entrance examination procedure, personal data processing controller, and prevention of corruption measures

The Responsible of the U.O. Alta Formazione of the Sant'Anna School of Advanced Studies - Via Maffi, No. 27, 56127 Pisa - tel. 050/882645 - fax 050/882633 - e-mail: altaformazione@santannapisa.it, is the person responsible for the competitive entrance examination procedure referred to in this call for applications, pursuant to the provisions of art. 5 of Law No. 241/90.

The Sant'Anna School of Advanced Studies complies with the laws and regulations relating to the prevention of corruption (Law No. 190/2012) by applying the measures identified in the “Three-year prevention of corruption plan” published in the “Transparent Administration” section of the institutional website at the following address: www.santannapisa.it.

Sant'Anna School of Advanced Studies (hereinafter the “School”), represented by the Rector, as Data Controller, under the article 13 of the EU General Data Protection Regulation n. 679/2016 and under the Italian Legislative Decree 30 June 2003 (“Privacy Code regarding the protection of personal data”) with regard to the processing of personal data, and on his behalf, Roberta Chiordi, roberta.chiordi@santannapisa.it, Head of the UO Alta Formazione will process your data. Please read the privacy statement available at <https://www.santannapisa.it/it/alta-formazione-info>.