

**Masters on
Photonic Integrated Circuits, Sensors and NETWORKS
(PIXNET)
academic years 2019/2021**

CALL FOR APPLICATIONS

Art. 1

Description and Activation of the Masters

The Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) 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 2019/2020 and will take place in the buildings and relevant laboratories of the universities involved, starting in September/October 2019 and ending in August/September 2021. The initiative is structured into two main paths: a **local one**, which will develop exclusively in Italy at the Scuola Superiore Sant'Anna, and an **international path**, under the Erasmus + Programme.

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: http://ec.europa.eu/programmes/erasmus-plus/resources_en.

The **PIXNET local path** consists of a University Masters – 1st level diploma and is offered entirely by Scuola Superiore Sant'Anna along the academic years 2019/20 and 2020/21, 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.

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 version, 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 institution 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/programme/mobility-paths/> and the visited institutions are reported in Table 1.

	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
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 project and which will be reported in the Master’s thesis developed in the fourth semester).

Osaka University has semesters which are skewed with respect to the European standard semester schedule (Fall/Spring). Hence students cannot start their Master’s Programme from Osaka University. Students will be able to join Osaka University on the third or fourth semester of the Master’s.

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. 9.

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 consists 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 Labs. 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 Committees. 'Programme country' applicants (see note 1 for definition) who expect to gain such qualifications **within July 30th, 2019** 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. 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 English¹:

- **IELTS 6.5** overall with minimum **6.0 in each section**;
- **TOEFL IBT 92** overall with minimum of **21 in each section**;
- University of Cambridge Proof that you have passed the University of Cambridge '**Certificate of Proficiency in English (CPE)**', or University of Cambridge '**Certificate in Advanced English (CAE)**', grades A-C;
- Proof of having successfully completed a prior study program (Bachelor, Master) where English is the **official medium of instruction**; the Institution where you attended must certify it;
- Any other Common European Framework of Reference for Languages (CEFR) Level B2 certification;
- The status of native speaker of English.

Prospective students **must possess all requirements before the submission deadline**, as stated in the following Art. 8.

Art. 6 **Application Procedure for Students**

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

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

- local path;
- international path without scholarship;
- international path with scholarship.

In each application, candidates should provide the following information:

- surname; forename; place/country and date of birth; citizenship(s)²; gender; marital status; 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, average score of exams taken. In order to check their CGPA, candidates can use the calculator provided at <https://www.foreigncredits.com/Resources/GPA-Calculator/>.

¹ Actual Requirements at time of visa issue may vary or be subject to the discretion of relevant authorities.

² Candidates with multiple nationality must decide at application stage under which nationality they apply.

Programme country applicants who expect to graduate within July 30th, 2019 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;
- request for an Erasmus Mundus scholarship and corresponding category (Programme Country, Partner Country, ENI South, ASIA LDC Countries, Latin America – LMI Countries, Latin America – Brazil and Mexico, Latin America remaining countries, according to the European Commission criteria, as reported in Art.7) and declaration from the candidate that the relevant eligibility criteria are fulfilled³;
- 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 include in the application (all materials must be in Adobe pdf format and must use the file-name nomenclature shown):

- **Cv_Surname_Name.pdf**: signed curriculum vitae in English (European format - <https://europass.cedefop.europa.eu/it/documents/curriculum-vitae/templates-instructions>) covering the educational background, cultural and professional experience and all other information that might help in the evaluation of the candidate;
- **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.⁴
- **Certificate_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;⁵
- **Motivation_Surname_Name.pdf**: motivation letter;

³ Nationality and residence, 12-month residence rule (see following note), non EMMC (Erasmus Mundus – Action 1) and/or EMJMD scholarship holder previously etc.

⁴ 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.

⁵ The transcript must clearly report the scale and/or criteria used for the exam evaluation; acronyms must be clearly specified.

- **Passport_Surname_Name.pdf**: copy of main page(s) of passport for proof of nationality;
- **Other_Surname_Name.pdf**: any other useful documentation for the assessment;
- **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...);
- **English_Surname_name.pdf**: English proficiency certificate (TOEFL, IELTS, Cambridge or other official certificates).

Applications with missing information will not be considered valid. Requests for the completion of application documents must be satisfied within the date indicated in the notification e-mail sent by the Secretariat.

Applications must be submitted according to the deadlines provided in art. 8. 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. The Institution 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, the Institution 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. 7

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**”⁶ 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

⁶ PROGRAMME COUNTRIES.

Member States of the European Union (EU): Austria , Belgium, Bulgaria, Cyprus, Croatia, Czech Republic, 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: former Yugoslav Republic of 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.

scholarship reserved for applicants with citizenship of the following **targeted regions – geographical window**:

- **ENI South** (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine⁷, Syria, Tunisia);
- **Asia – Less Developed Countries** (Afghanistan, Bangladesh, Bhutan, Cambodia, Laos, Myanmar, Nepal);
- **Latin America – Lower Middle Income countries** (Bolivia, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay);
- **Latin America – Brazil and Mexico**;
- **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*, 27 EU Member States students, 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.

Regarding the awarding of Erasmus Mundus scholarship, PIXNET will strictly comply with the binding provisions of the Erasmus Plus 2014-2020 Programme Guide 2017 v2 available at: http://ec.europa.eu/programmes/erasmus-plus/resources_en.

EMJMD student scholarships cover the entire duration of the Master course and are awarded exclusively for a full-time enrolment in the 2019-21 PIXNET second intake.

Notification of the awarding of one of the above-mentioned scholarships to an applicant, along with their admission to the Master’s, will be done, as established in art. 9, **via e-mail only**. 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 holders⁸:

<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>	

⁷ This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue

⁸ 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.

		€ 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 .
n. 3	<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.
	TOTAL for the 2-year EMJMD	Students resident in a Programme country: maximum € 35.000,00 ; Students resident less than 4.000 Km from coordinating HEI: maximum € 47.000,00 ; Students resident more than 4.000 Km from coordinating HEI: maximum € 49.000,00 ; 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

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. 8

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 in the same benefits as that of the first year grant.

Art. 9

Deadlines

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

PIXNET Erasmus Mundus international path applicants

applying for a *Partner Country* scholarship: **1st March 2019** (11.59 am Italian Local Time);

applying for a *Programme Country* scholarship: **15th March 2019** (11.59 am Italian Local Time);

applying without scholarship: **5th April 2019** (11.59 am Italian Local Time);

PIXNET local path: **5th April 2019** (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 2019-20 is the following:

Programme Country Students

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

Partner Country Students

- 20 full EM Scholarships, out of which up to 6 are for candidates of targeted regions as mentioned in Art. 7;
- 1 full tuition waiver in curriculum 4.

Assignment of the scholarship follows the preference rank provided by the students, respecting a country balance criterion (i.e. no more than three scholarship holders should come from the same country⁹) and an institution/mobility balance criterion according to the figures provided in Table 4.

Allotment of scholarships over the mobility paths

Mobility Paths						Programme Country		Partner Country and targeted Regions	
Curriculum	1 sem.	2 sem.	3 sem.	4 sem.	Degree	EM Scholarship	Tuition waiver	EM Scholarship	Tuition waiver
1	SSSA	SSSA	TUE	TUE	SSSA-TUE	max 1	1*	5	
2	ASTON	ASTON	TUE	TUE	ASTON-TUE	max 1	1**	1	
3	SSSA	SSSA	ASTON	ASTON	SSSA-ASTON	max 1		2	
4	ASTON	ASTON	SSSA	SSSA	ASTON-SSSA	max 1		3	1***
5	ASTON	ASTON	OSAKA	SSSA	SSSA-ASTON-OSAKA	max 1		4	
6	SSSA	SSSA	ASTON	OSAKA	SSSA-ASTON	max 1	1***	7	
TOTAL # of scholarships						6	3	22	1

* tuition waiver by SSSA only

** tuition waiver by ASTON only

*** full tuition waiver

Table 4. Scholarship allotment

Eligible candidates will be offered a scholarship bound to the mobility path (curriculum) where they are best ranked. 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.

⁹ 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.

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 40.

At the end of each selection procedures, according to the deadlines provided in art. 8, 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. 7) 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 who receives the scholarship by the Scuola Superiore Sant'Anna specified in Art. 6 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. 9:

- 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);
- c) Valid copy of passport or alternative international ID;
- 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 30th, 2019, 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. 7 – 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 provisions¹⁰ for the international path.

¹⁰ 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 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.

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 to the local path 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;
- a "Certificate of Equivalence of Qualification" 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 the Institution 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 sixty-six 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.

Art. 14

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

Under the art. 5 of the Act n. 241/90 and ff.mm., the person in charge of the competition procedure is Mrs. Elena Cambi, Head of the U.O. Higher Education - Sant'Anna School of Advanced Studies - Via Maffi 27, 56127 Pisa - tel. 050/882645 - fax 050/882633 - e-mail: altaformazione@santannapisa.it.

Sant'Anna School of Advanced Studies (hereinafter the "School"), 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, on his behalf, the authorized internal processor is Roberta Chiordi, roberta.chiordi@santannapisa.it, Head of the UO Alta Formazione. Other employees of the UO Alta Formazione office and Didactical Office, other Training Education Course / Master Course coordinator, and evaluation committees members will be instructed and authorized to the data processing.

Your personal data (e.g. name, surname, contact information, and all the data filled in the above forms) will be processed by the School in order to:

- Proceed this competition test
- Create the career record.

The legal basis of the data processing are the performance of a contract (article 6 sub b Reg. EU 679/2016), and public interest (art. 6 sub e) Reg. EU 679/2016).

In addition, we will automated process your personal data to pursue the above-mentioned public purposes as well as we will process your anonymized data for statistics.

It is assured that your data will be processed in compliance with the principles of correctness, lawfulness, transparency, and Public Administration efficiency under the European and national legislation on the topic (Reg. EU 679/2016 and Legislative Decree 196/2003) for an unlimited period as stated in the “Massimario di conservazione” Act of the School. As data subjects, you shall have the right to obtain at any time confirmation as to whether or not personal data concerning them exist, to be informed of the content and source of such data, to check their accuracy and request integration, updating or rectification, as well as to have the processing of your personal data restricted and any unlawfully processed data erased, made anonymous or blocked. You shall exercise your rights, submitting your request to the Sant’Anna School Office U.O. Alta Formazione, Via Maffi, 27 – 56127 Pisa, e-mail: altaformazione@santannapisa.it, as well as to the following e-mail address: privacy@santannapisa.it. You may also lodge a complaint to «Italian Data Protection Authority».

For further information, please, contact the School «Data Protection Officer», e-mail address: dpo@santannapisa.it.

The Sant'Anna School of Advanced Studies operates in compliance with the legislation on the prevention of corruption (L.190 / 2012).