



Sant'Anna
Scuola Universitaria Superiore Pisa

**Internal Regulations for the Students of the First Level
Master in Photonic Integrated Circuits, Sensors and
Networks (PIXNET)
A.Y. 2018/2020**

SANT'ANNA SCHOOL OF ADVANCED STUDIES

**INTERNAL REGULATIONS FOR THE STUDENTS OF THE FIRST LEVEL MASTERS ON
PHOTONIC INTEGRATED CIRCUITS, SENSORS AND NETWORKS- LOCAL PATH
A.Y.2018/2010**

Approved by Rector's Decree No n.192 of 3.04.2018

**RULES AND REGULATIONS FOR THE STUDENTS OF THE
MASTERS ON PHOTONIC INTEGRATED CIRCUITS, SENSORS AND NETWORKS- LOCAL PATH
AT SANT'ANNA SCHOOL OF ADVANCED STUDIES
A.Y. 2018/2020**

**Art.1
(Goals)**

This act concerns the students of the Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) - Local Path at Sant'Anna School of Advanced Studies and integrates the Call for Applications, the Consortium PIXNET Student Agreement and the General Rules and Regulations for students of the masters/courses organised by the Sant'Anna School of Advanced Studies .

**Art. 2
(Duration of the Master Course)**

The Master's starts on September 17th , 2018 and ends on September 16th , 2020.

**Art. 3
(University credits)**

As the stated in the Study Plan, the Master's requires attendance at courses that confer university credits. The acquisition of credits occurs only after the passing of each proficiency-verification exam (intermediate and final) and is subject to the minimum-attendance requirements. The assessment exams will be evaluated with a score out of thirty. Exams are passed with a minimum score of 18. In the case of failure, an exam maybe re-taken only once. No credits can be gained for a failed re-taken exam.

In order to be awarded the Master's diploma (*Master universitario di I livello*, in accordance with art. 3 of D.M. 270/2004), it is necessary to acquire at least 120 university credits (CFU).

**Art. 4
(Organisation of the Master's)**

The PIXNET Local Path is organised over two periods with distinct training objectives, one propaedeutic with respect to the other.

The first period, related to the teaching part, is divided in three consecutive semesters for a total amount of 90 ECTS and at least 900 hours of class lectures and lab training. Classes will be shared with the students following the Erasmus Mundus international path. The objective of the first period is the transmission of competence through front teaching, lab training, stand-alone review of material and specialised seminars of universities and companies representative researchers as well.

The table below reports the entire training programme at Sant'Anna School of Advanced Studies for the first three semesters:

TEACHING MODULES	ECTS
FIRST SEMESTER (Mandatory)	30
Communication Theory and Digital Transmission	4
Communication Networks	4
Stochastic Processes and Queuing Theory	6
Electromagnetic fields and propagation I	2
Introduction to Programming tools	4
Network Simulation	3
Simulation techniques for digital communication systems	4
Introduction to wireless communication networks	3
SECOND SEMESTER (Mandatory)	30
Fundamentals of Applied Optics	4
Electromagnetic Fields and Propagation II	2
Fundamentals of Optical Communications	3
FPGA for communication networks prototyping	2
Design of Access, Metro and Core Networks	4
Microwave Photonics	3
Lab of Network Software	3
Lab of Traffic Engineering	3
Photonic Technologies	3
Photonic Integrated Technologies	3
THIRD SEMESTER - General Courses (Mandatory)	12
Photonic Integrated Circuits	3
Design of Optical Communication Systems	3
Optical Amplification and Fibre-Optic sensing	3
Photonic Integrated Circuit Packaging	3
THIRD SEMESTER / Free-choice eligible courses	Min 18
Advanced Optical Networking	3
Lab of Photonic Switching – First Part	3
Lab of Photonic Switching – Second Part	3
Lab of Photonic Systems – First Part	3
Network Simulation	3
Lab of Photonic Amplification and Components	3
Introduction to wireless communication networks	3
Simulation techniques for digital communication systems	3
Monte Carlo simulation techniques	3

The second period corresponding to the fourth (last) semester, envisions the original development and relevant preparation of a written dissertation (Master's thesis) developed in the laboratories of the Institute of Communication, Information and Perception Technologies (TeCIP).

This period has the scope to complement the in-class training with an operative direct experience, in which the competence acquired during the first period can be efficiently spent.

Master's thesis developed in laboratories of partner companies or institutions shall be authorised, as an exception, from the Master coordinators.

Art. 5 **(Master's thesis)**

At the end of the Master's Programme, the students will produce a written dissertation (Master's thesis) on the activity carried out during the final semester. This thesis is subsequently publicly discussed and assessed by a Committee appointed by the Director of the TeCIP Institute.

The coordinators of the Master's Course agree upon the subject of the Master's thesis and the student, taking into account the student's inclinations, chooses a scientific tutor.

The Master's thesis, based on the course, allows gaining 30 university credits.

During the last semester, a tutor at the TeCIP Labs mentors the student. The tutor guides and supports the students in the development of the Master's thesis and monitors his/her attendance and progress.

If the Master's thesis is developed in partner companies/institute laboratories, it will be defined by a special agreement, according to the regulation in force, which must be signed by the student.

After the written acceptance of the agreement, any student that renounces or interrupts their thesis cannot obtain the Master's Diploma.

Art.6 **(Online dissertation archive)**

Admission to the final exam is also subject to file the Project Work, in a digital format, in the online dissertation archive of the Sant'Anna School of Advanced Studies at <https://dta.santannapisa.it/> . This has to be done within the deadline communicated to the student during the last semester.

Art. 7 **(Lecture hours)**

Lectures and practice sessions are given from Monday to Friday, with this schedule:

- Morning: 9.00 am – 1.00 pm
- Afternoon: 2.00 pm – 7.00 pm

Art. 8 **(Course location)**

All lectures and Lab sessions of the course are given in the lecture rooms and Laboratories of the TeCIP Institute. The admission to the TeCIP building is allowed from 8 am to 8 pm, from Monday to Friday.

Art. 9 **(Compulsory attendance)**

Participation in courses is compulsory and student attendance will be monitored. Students must register their attendance daily, in the attendance register of each didactic modules. If you fail to sign, you will be considered as absent. If you leave the hall during a lecture for more than fifteen minutes without a valid reason, you will be considered as absent.

Student has not to exceed 20% of overall absences, and 25% of single didactic module absences in the first period. Exceeding the overall absences threshold prevents to obtain the final diploma. Exceeding the single didactic module absences threshold prevents the passage to the next semester. Those signing the attendance register and leaving the classroom before the end of the session without urgent reasons will be considered absent without leave. Absences caused by serious reasons are justified if properly documented. The grantees of scholarships, lodging grants and tuition fee waivers that do not meet the attendance requirements will be required to refund the grants and tuition fee up to that moment.

At the end of each module, 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 teacher through a written or oral exam, the submission of documentation, laboratory practice tests, or a combination of all of these evaluation methods.

Art. 10 **(Evaluation procedures)**

Courses and relevant exams are organized on a semester basis (1st 3rd semester – September/February, 2nd 4th semester – March/September). In order to assess the students' proficiency, a test is provided at the end of each didactic module, according to the form that teachers will notify in advance.

A student who does not pass the test or does not attend it has a second chance. A student not passing the supplementary test is dismissed from the Master's programme with a Rector's decree.

A student dropping out or dismissed from the Master's loses every benefits he/she might have obtained, starting from the date of dismissal/withdrawal. Moreover, he/she shall return any amount received up to the time of dismissal/withdrawal.

The passing of the evaluation test leads to the attainment of the corresponding credits. In order to obtain the Master's Diploma, the student must obtain a minimum of 120 credits and a positive evaluation of the Master's thesis from an evaluation committee, specifically appointed.

Art. 11 **(Academic Integrity)**

While attending the Master's Programme, students shall always behave honestly and respectfully towards all persons and structures/facilities, as laid down by the General Rules and Regulations and by the General Rules and Regulations for the students, of the School, by the General Rules and Regulations for PIXNET Local Path students and by the Student Integrity Code of the Master PIXNET Local Path (annex 1).

Suspected violations will be handled accordingly.

Art. 12 **(Diploma awarded)**

At the end of the Master's Programme, those students who have attended at least 80% of the entire teaching program and have passed all the required examinations receive from Sant'Anna School of Advanced Studies a Master's diploma (*Master universitario di I livello*, in accordance with art. 3 of D.M. 270/2004).

Art. 13 **(Professors and courses evaluation forms)**

It will be compulsory for each student to anonymously compile evaluation forms related to the didactic activity carried out by each professor as well as to the single courses and to the whole Master's Course. Failure to do so may lead to the exclusion of the student from the awarding of required certificates and titles.

Art. 13 **(Tuition fees)**

The cost of the Master is €3.000,00 per academic year to be paid into two instalments, corresponding to the a.y. 2018/2019. First instalment shall be paid within one week from the date of reception of the admission letter and returned with the signed acceptance. Second instalment (for a.y. 2018/2019) shall be paid by August 31st, 2018.

The second year (a.y.2019/2020) the tuition fees will be paid into one single instalment by 30th December 2019.

The payment shall be made through bank transfer addressed to:

**Institute of Communication, Information and Perception Engineering (TeCIP) - Sant'Anna
School of Advanced Studies**

Unicredit Banca S.p.A. Filiale di Pisa, Piazza Garibaldi 1

IBAN: IT 3200200814006000401272765

BIC/SWIFT CODE: UNCRITM1G12

Reason for payment:

For the 1st instalment a.y. 2018/19: “Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) - Local Path - Tuition fee a.y. 2018/2019, **student’s full name** – instalment 1”.

For the 2nd instalment a.y. 2018/19: “Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) - Local Path - Tuition fee a.y. 2018/2019, **student’s full name** – instalment 2”.

For the instalment of a.y. 2019/20: “Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) - Local Path - Tuition fee a.y. 2019/20, **student’s full name**”.

Tuition fees includes lecture attendance, educational materials and tutorship during Master’s thesis preparation. The logistics and travel expenses are to be borne by each participant. The School will provide private health and accident insurance for the period of the Master’s.

Non-payment of instalments prevents the access to the Master’s courses or to the second academic year. In the event of any student withdrawing from or dropping out of the Programme, after 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.

Art.14 **Insurance**

Duly enrolled students are insured during the whole Master by:

Accident Insurance policy No. 361091369 – Generali Assicurazioni: the School insures its students against the risk of accidents occurred when attending the lectures and all the other activities organised by the School in the exercise of its institutional activities, including participation in the planned educational and/or training and/or research activities and in all the activities that are incidental, complementary, related, preliminary and subsequent to the main ones, however and wherever carried out and with any means or instruments deemed useful or necessary, none excluded nor excepted, provided that they are formally authorized by the Master’s Director.

The insurance covers accidents suffered by the policyholders (the students) during transfers, travels and trips made necessary to carry out their activities, including the use of vehicles or means of transport of any kind.

The risk of accidents on the way to or from the School is excluded.

Civil liability insurance policy - No. A2LIA01353H – Lloyd's: The School is insured against third party liability for damages involuntarily caused to third parties as a result of accidents related to the risks of the activities described in the policy. The insurance also applies to the School's civil liability arising from negligence or fraud by the persons for whose actions it is responsible.

Art. 15
(Scholarship)

TeCIP Institute makes available a scholarship for its Masters on Photonic Integrated Circuits, Sensors and Networks – Local path, exclusively developed at Sant'Anna School of Advanced Studies, for the first academic year, to the first ranked applicant in the admission list, covering the following:

- Tuition waiver for the first a.y. of the Master course, equivalent to €3.000, 00;
- Annual lodging and board equivalent to €6.000,00;
- Private health and accident insurance for the entire period of the Master's.

All other expenses are at the scholarship holder charge. No extra source for funding is available, nor can be negotiated.

For the second academic year, the scholarship will be assigned according to the best academic performance of the participants, based on the balanced mark average registered during the first here.

Art. 16
(Accessory services)

Surface Mail: Must be addressed to “**Institute of Communication, Information and Perception Technologies (TeCIP), Area della Ricerca del CNR (S. Cataldo), Via Moruzzi 1, 56124 – PISA - ITALY**”, specifying “**Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) - Local Path**”, and the name of the student.

Fax: The students of the Master can receive fax to the **fax number +39-050882194**, specifying “**Masters on Photonic Integrated Circuits, Sensors and NETWORKS (PIXNET) - Local Path**”, and the name of the student. Fax are delivered during the lunch break, or at the end of the afternoon lectures.

Library: During the Master Course, students can enter into the Library of the Sant'Anna School of Advanced Studies, by a card that allows the access for reference or either to borrow the books, under the specific regulations of the Library. Opening hours are available on the Sant'Anna School of Advanced Studies website.

Didactic materials: lecturers can make available for free slides and the material for the practices (mainly in digital format). Any other material (extra photocopies, books, stationery, floppy, cd-rom, etc.) is charged to the student.

Secretariat Front Office: Master Secretariat is open to the students Monday, Thursday from 10.00 to 12.00.

Photocopies: each student will be given a photocopier account, to be used at the photocopier of the ground floor of the TeCIP building for making up to 1000 copies per a.y. Students can recharge their account with extra copies at the PIXNET Secretary's Office, buying a bonus of 1000 photocopies at the rate of €10.00.

Badge: The Sant'Anna School of Advanced Studies provides students with an identification badge. The badge grants access to the ground floor of the TeCIP building and to the Sant'Anna School of Advanced Studies headquarters. If lost, the cost of the badge shall be refunded by the student. The badge shall be returned at the end of the Master Course.

Contacts

Master's Director

Email: p.castoldi@santannapisa.it

Tel. +39 050882152

Master's Secretary's Office

Email: pixnet@santannapisa.it

Tel. +39 050882042

Segreteria U.O. Segreteria Alta Formazione

Email: altaformazione@santannapisa.it

[Tel: +39 050882645](tel:+39050882645) - Fax: + 39 05088263

Annex 1

STUDENT INTEGRITY CODE

The mission of the Master PIXNET Integrity Code is:

- to promote the growth of ethically responsible students and future researchers through adherence to the highest standards of academic integrity
- to encourage an environment of honour and trust within the PIXNET community.
- In addition to this Code, all students are expected to know fully the Sant'Anna School of Advanced Studies Rules and Regulations, which may be consulted at www.santannapisa.it
- The Code will be administered and maintained by the Master PIXNET Secretary's Office, in close collaboration with the Administration of TeCIP, and the Central Administration of the Sant'Anna School of Advanced Studies .

Specific Standards

A. Academic Pursuits

The PIXNET student is expected to engage honestly and fairly in the learning process, maintaining standards of academic integrity. No specific set of rules or definitions can embrace every act of academic misconduct. In general, Academic misconduct is any action or attempted action that may result in creating an unfair academic advantage for oneself or an unfair academic advantage or disadvantage for any other member or members of the academic community.

Below there are types of academic misconduct with examples of each. Please note that the list of potential academic offences should not be considered exhaustive:

Cheating

Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question, such as:

- Copying or attempting to copy from others during an exam or on an assignment
- Communicating answers with another person during an exam
- Using unauthorized materials, prepared answers, written notes during an exam
- Allowing others to do an assignment or portion of an assignment for you
- Collaborating on an exam or assignment with any other person without prior approval from the instructor

Plagiarism

Plagiarism is misrepresenting the ideas, expression of ideas or work of others as one's own. It includes reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and representing these as one's own thinking by not acknowledging the appropriate source or by the failure to use appropriate quotation marks. Some examples of plagiarism include:

- Wholesale copying of passages from works of others into your homework, essay, term paper, or dissertation without acknowledgment
- Use of the views, opinions, or insights of another without acknowledgment
- Paraphrasing of another person's characteristic or original phraseology, metaphor, or other literary device without acknowledgment

False Information and Representation, Fabrication or Alteration of Information

- Furnishing false information in the context of an academic assignment
- Failing to identify yourself honestly in the context of an academic obligation
- Fabricating or altering information or data and presenting it as legitimate
- Providing false or misleading information to an instructor or any other University official.

- Concocting facts or reference
- Fabricating false medical or compassionate certificates
- Fabricating false letters of support or other letters of reference
- Fabricating false academic records, transcripts or other registrarial records
- Forgery of an instructor's signature on a letter of recommendation or any other document
- Submitting an altered transcript of grades to or from another institution or employer
- Putting your name on another person's exam or assignment.

Impersonation

Impersonation involves having someone impersonate oneself, either in person or electronically, in class, in an examination or in connection with any type of academic requirement, course assignment or material, or of availing oneself of the results of such impersonation. Both the impersonator and the individual impersonated (if aware of the impersonation) are subject to disciplinary proceedings.

Property violations

Student is expected to respect the materials, data and property of other members of the Sant'Anna School of Advanced Studies community. The students will not misuse or misappropriate the materials, data, or other property of another especially through, but not limited to:

- Accessing, removing, or destroying any information, materials, or other property from another student's premises, locker, computer files, or mail folder without prior permission
- Sabotaging or stealing another person's assignment, book, paper, notes, experiment, project, electronic hardware or software
- Improper access to, or electronically interfering with, the property of another person or the University via computer or other means
- Obtaining a copy of an exam or assignment prior to its approved release by the instructor
- Accessing restricted areas of the Sant'Anna School of Advanced Studies without prior authorization
- Accessing Sant'Anna School of Advanced Studies structures outside the office hours, without prior authorization
- Disseminating or otherwise making confidential information public to a third party without prior written consent.

Disturbances in the Classroom

- Interference with the course of instruction to the detriment of other students.
- Failure to comply with the instructions or directives of the course instructor
- Unnecessarily activating fire alarms.

B. Individual Rights violations

The students are expected to respect the individual rights of others, observing the Sant'Anna School of Advanced Studies policies against harassment and discrimination. Any complaint of a violation of these policies brought to the attention to the PIXNET Coordinator will be referred to the appropriate body of the jurisdiction within the Sant'Anna School of Advanced Studies.

C. Reports and Adjudication

Any member of the University community (faculty, staff, students and others) has the specific Responsibility to report to the Master PIXNET Coordinator suspected act of Academic dishonesty.

Students have the right to a fair and complete inquiry into any alleged violation of the integrity Code. The PIXNET Coordinator will impartially gather evidence from the student, the complainant, and other appropriate parties. The PIXNET Coordinator will review the evidences with the student who will have an opportunity to respond to the evidences and may call witnesses.

At the end of the inquiry process, the PIXNET Coordinator will clear the student from the charges brought against her or him, or decide which sanction or combinations of sanctions is appropriate. The outcome is notified to the student by the PIXNET Coordinator by e-mail.

A notification of academic misconduct is recorded in the Academic Misconduct Register, which is kept from the Master PIXNET Secretary's Office.

Access to the Academic Misconduct Register will be limited to those involved in processing appeals and those involved in processing additional complaints against the student.

D. Sanctions

Violations of the Code will be treated seriously, with special attention to repeat offenders. In assign a sanction, the PIXNET Coordinator will take into account the seriousness of the offence and the particular circumstances of the case.

Sanctions for a violation may include one or more of the following:

- A failing grade for the assignment in which the violation occurred
- A failing grade for the course in which the violation occurred
- Other sanctions as appropriate, including for example remedial work, lower course grade and so on
- An official letter of reprimand
- The rescinding of scholarships, grants and tuition fee reductions
- The rescinding and the reimbursement of scholarships, grants and tuition fee reductions
- Denial of the
- A recommendation for expulsion from the University.

If a person is found guilty of academic misconduct after having a degree conferred, the PIXNET Coordinator may recommend the Rector of the Sant'Anna School of Advanced Studies to revoke his or her.

E. Appeals

Appeals shall be made in writing to the Rector of the Sant'Anna School of Advanced Studies within ten business days after the date of notification to the student.

Appeals are limited to the following grounds: new evidence that was not available at the time of the adjudication of the case and that may affect the outcome of the case; improper procedure that materially and adversely affected the earlier outcome of the case, and excessive sanction.

Appeals will be reviewed by the Rector of the Sant'Anna School of Advanced Studies who may consult the written record of the case, the appeal request, and any person involved in the adjudication process, or other appropriate party. The Rector of the Sant'Anna School of Advanced Studies may confirm, modify, or remand the case to the PIXNET Coordinator with instructions for the further action. The decision of the Rector of the Sant'Anna School of Advanced Studies is final.

The signatory declares that the student has read and accept all the conditions laid down in the present document "Internal Regulations for the Students of the First Level Master in Photonic Integrated Circuits, Sensors and Networks (PIXNET) – a.y. 2018/2020" (Rules and regulations + Annex 1).

The Student: Mr./Mrs.

Place and date:

Signature: