CALL FOR APPLICATIONS

II LEVEL UNIVERSITY MASTER OF UNDERWATER AND HYPERBARIC MEDICINE “Piergiorgio Data”
AA.YY. 2019/2020 – 2021/2022

The Institute of Life Sciences of the Scuola Superiore Sant’Anna of Pisa activates, pursuant to art. 3 of the Statute, the VIII edition of the II level University Master in “Underwater and Hyperbaric Medicine - PierGiorgio Data”.

The Master is organized in close cooperation with the Institute of Clinical Physiology of the CNR according to a specific agreement with the Institute of Life Sciences of the Scuola Superiore Sant’Anna in Pisa.

The Master’s program includes two two-year training courses with a total duration of 720 hours starting on April 20 2020 and ending on April 29 2022, which differs for the way in which teaching activities are delivered.

The first course, carried out at the headquarters of the Scuola Superiore Sant’Anna and at the Institute of Clinical Physiology - Research Area of the CNR of Pisa, in Italian and English, foresees the didactic activity in mixed mode: frontal lessons and in e-learning mode, by webinar;

The second path, reserved for 10 (ten) EU doctors (with the exception of citizens residing in the Italian territory) and non-EU ones, is held in English only by webinar.

ART. 2 UNIVERSITY CREDITS

The achievement of the Master's diploma allow the recognition of 60 University Credits (CFU) complying with the didactic obligations of the practical activity and guaranteeing 75% attendance of all the planned activities.

The credits’ acquisition is related to the positive results of the intermediate and final learning assessment tests, and to the attendance obligations required by the Disciplinary of the Master’s students.

Pursuant to the Ministry of Health Circular dated March 5, 2002, the attendance at the Master's diploma, as a course with a final title, does not award ECM credits and exempts the medical doctors from obtaining ECM during the Master's years of attendance and the related exams.

ART. 3 TRAINING OBJECTIVES

The Master’s educational target, according to the European Guidelines “Training standards for diving and hyperbaric medicine”, stated by the Joint Medical Subcommittee of the European Committee for Hyperbaric Medicine (ECHM) and by the European Diving Technology Committee (EDTC), is to provide graduates in Medicine and Surgery with specific knowledge in the bio-medical, physical and technological fields, of Underwater and Hyperbaric Medicine.

Specifically, the Master aims to:
• provide an academic and practical experience for doctors who want to pursue a career as a specialist in underwater and hyperbaric medicine;
• establish a theoretical-practical basis for assessing the psycho-physical aptitudes of candidates for underwater activities that require certification, as well as for organizing, verifying and guaranteeing the suitability of rescue structures, and training in scientific research in the field of underwater and hyperbaric medicine;
• provide practical and operational knowledge to prevent and manage diving accidents, decompression sickness, diseases that require hyperbaric treatment;
• provide practical and operational knowledge to prevent and manage work accidents, in the emerging field of Tunneling work;
• provide skills to those who want to work and manage a hyperbaric implant and to design specialized research protocols.

The Master will focus on the most modern technologies and methodologies, with particular attention on aspects related to clinical practice.

The teachings will have a strong interdisciplinary character, referring to important aspects of Physics, Engineering, Biomedical Engineering, Robotic Engineering, Economics and specific Legislation in the field of insurance and work.

ART. 4 – JOB OPPORTUNITIES

• Medical Activity in Public and Private Centers of Hyperbaric Medicine; the students also acquire the certifications of the ECHM (European Committee for Hyperbaric Medicine) and the ECB (European College of Baromedicine) of level IIH for Hyperbaric Medicine.

• Activities in the Field of Underwater Medicine (fitness, rescue, etc.) with particular reference to the activities of the Commercial Diving in IN and / or Off-shore for which the students acquire the European certification DMAC (Diving Medical Advisory Committee) and the EDTCmed (European Diving Technology Committee medical assessment of working divers), in accordance with the criteria of the European Committee for Hyperbaric Medicine (ECHM), level I (Medical evaluation of divers - Medical examiner of divers) and IID (Medical management of underwater diseases and accidents - Expertise in diving medicine).

• Activities in the field of occupational medicine in the hypobaric and / or hyperbaric environment. In particular in the emerging Tunnelling field.

ART. 5 - TRAINING COURSE IN MIXED DIDACTIC EDUCATION MODE AND RELATED ARTICULATION

The teaching activities provided in mixed mode involves a total of 720 hours as follows:

• 250 hours of frontal lectures in the classroom and stored in clouds files, accessible by web;
• 50 hours of seminar activity carried out by international experts;
• 120 hours of webinar training;
• 180 hours of hyperbaric medicine stage;
• 100 hours of stage in Underwater Medicine;
• 20 hours stage in Tunneling activities

The lectures are held at the headquarters of the Scuola Superiore Sant’Anna and / or at the Institute of Clinical Physiology of the CNR in the CNR Research Area of Pisa. During the training course the lessons will be delivered both in Italian and in English.

The Master foresee, also the obligatory participation in the following course, within the hours of hyperbaric medicine stage:
- Treatment of Gases for Medical Use provided by the SIAD company (Italian Acetylene and Derivatives Company) of the international Praxair group at the Avenza site) and issue of relative certification of attendance: 8 hours;

Classroom training is divided into the following subject areas:
- Preliminary area: Hyperbaric Physics and Fluids, Physiology, Applied Pathophysiology
- Underwater Medicine
- Emergency Area
- Hyperbaric Medicine
- Bioengineering
- Economic and Legal Sciences

The rights and duties of the students of the Master, and the relationships between the students and the School's structures, are regulated by the General Disciplinary of the students of the Courses and Masters of the High Education and by the Internal Disciplinary of the students of the Master.

**ART. 6 - TRAINING COURSE BY E-LEARNING AND INTERNAL ARTICULATION**

The theoretical lessons delivered in e-learning mode, carried out in collaboration with the Institute of Clinical Physiology of the CNR of Pisa, is structured as follows:

- 420 hours of e-learning teaching provided entirely in English on a specific webinar platform and seminar activity available via webinar and/or as a registration accessible via the web;
- 300 hours of practical activity at national and international institutions in the framework of ad hoc conventions with the Sant'Anna School of Advanced Studies and in cooperation with the CNR Institute of Clinical Physiology.

The rights and duties of the students of the Master, and the relationships between the students and the School's structures, are regulated by the General Disciplinary of the students of the Courses and Masters of the High Education and by the Internal Disciplinary of the students of the Master.

**ART. 7 – PROJECT WORK**

At the end of the Master, the students of both the training courses are required to present a written paper (Project work) on the topics covered by the stages, which will be discussed and evaluated by a Commission appointed by Decree of the Rector of the Scuola Superiore Sant'Anna.

The discussion of the Project Work must take place not later than the first useful session of the academic year following the one of conclusion of the Master.

The Project Work must be filed in digital format, for subsequent publication, in the online thesis archive of the Scuola Superiore Sant'Anna according to the Master's Regulations.

**ART. 8 - ADMISSION REQUIREMENTS**

They are admitted who have a Master's degree in Medicine and Surgery or an equivalent qualification obtained within the deadline of the present application announcement, degree obtained in an Italian or foreign University or University Institution of the same rank.

Undergraduates who have completed all the exams before the beginning of the Master's program and who are expected to attain the degree no later than the extraordinary session of the academic year prior to the beginning of the Master may also apply for admission.
For participation in the Master's diploma, knowledge of the English language is required, which will be assessed by interview during the selection process.

The Administration may at any time, with a motivated provision, exclude the candidate for lack of the prescribed requirements.

**ART. 9 - APPLICATION FORM**

Candidates are required to register their application for admission by March 31, 2020 exclusively to the following addresses at www.santannapisa.it → Advance Education → Second Level Master's Diploma → “Master of underwater and hyperbaric medicine “Piergiorgio Data””.

The following documentation must be attached to the application as file attached:
- updated curriculum vitae, drawn up in European format;
- self-declaration of university degrees
- motivation letter;
- other documents deemed to be of interest (eg publication, etc.);
- a photocopy of a valid identity document.

Graduating candidates pursuant to art. 8 paragraph 2 must indicate in the application form the expected date for obtaining the qualification and supply a self-declaration of the exams taken with profit.

Applications received late or in a different way as indicated in this article, whatever the reason, will not be taken into consideration.

False deeds and false declarations are punished pursuant to the Penal Code and the special laws on the subject, Articles 75 and 76 of the Presidential Decree 445/2000.

The School may, at any time during the proceedings, even after the start of the Masters, carry out checks on the veracity of the statements made and the documents produced and request the exhibition of the original documents. In the event of false declarations, the School may at any time, with a Rector's motivated provision, exclude candidates from the selection procedure or the Master, without prejudice to the penal responsibilities arising therefrom.

**ART. 10 - SELECTION OF CANDIDATES**

The Master's program includes a minimum of 10 and a maximum of 35 students.

Following the stipulation of specific Conventions, the School can reserve n. 2 of the places provided in favor of affiliated institutions.

In case of failure to reach the minimum number of participants, the Management of the Master reserves the right not to activate the course.

The path referred to in art. 6 provides for a maximum of 10 reserved places in addition to the 25 places for participants in the mixed-mode training path referred to in Article 5.

The Commission will select the candidates, assigning up to a maximum of 50 points based on the following general criteria:

a) University titles: years spent to obtain the degree, final grade (average exams taken for undergraduates); vote on the specialization diploma or the average of the profit exams taken; other specialization diplomas: maximum 20 points.

b) Other qualifications: research activities, publications and professional experience in the fields of Underwater Medicine and / or Hyperbaric Medicine and / or Anesthesia and Resuscitation and / or
Intensive Care and / or Emergency Medicine and / or Sports Medicine, training post-graduate degree: maximum 20 points.

c) Motivational profile: maximum 10 points.

Only candidates who have obtained a score of 25 points or more in the evaluation of qualifications will be admitted to the next oral exams.

The interview and / or the aptitude test (max 50 points) will be finalized to ascertain the specific aptitudes.

The selection for both training courses is carried out by a special Commission appointed by the Rector's Decree of the Scuola Superiore Sant'Anna, based on the evaluation of the qualifications presented, the interview aimed at ascertaining the basic preparation and the motivational profile of the candidate in relation to the didactic objectives of the Master besides the knowledge of the English language.

For the evaluation of the qualifications obtained in an Italian or foreign University or University Institute of the same grade, the Selection Commission reserves the right to request further documents.

The time schedule of the interview is published exclusively on the School website and will be taken care of by each candidate personally check the date and time of your convocation.
Failure to attend the interview is considered as a waiver of participation in the selection.

The admission tests take place at the Scuola Superiore Sant'Anna, via Cardinale Maffi 27, Pisa or at the Institute of Clinical Physiology of the CNR of Pisa in via Moruzzi 1.

Interviews may also be carried out via telematic links (eg in Skype mode) or in other forms considered appropriate by the Commission for evaluation purposes.

At the end of the selection process, the Commission draws up two merit rankings.

Those attending the first 25 places of the merit ranking for the frequency of the course provided in mixed mode and the first 10 places concerning the mainly e-learning mode, who have obtained a overall rating of 70 points or more out of 100; in the event of renunciation, those who, despite being ranked above 25th position or 10th position, have obtained an overall score of 70 points or more out of 100, can take over.
In case of ex aequo precedes the younger candidate of age.

At the end of the selection, the Sant'Anna School of Advanced Studies, with a Rector's Decree, approves the selection deeds and the two merit rankings in which the winners of the competition are indicated, of course, subject to the verification of the requisites and the declared qualifications. The result of the selection is published on the School's website https://www.santanapisa.it/it/formazione/medicina-subacquea-eiperbarica-piergiorgio-data and communicated exclusively to those who are admitted through the address e-mail address indicated by the candidate in the application form -

Undergraduates, pursuant to art. 8 winning results are admitted "with reserve" up to the attainment of the degree within the terms indicated in the aforementioned article.

ART. 11 - ACCEPTANCE AND PAYMENT METHODS

The admitted students, who intend to participate in the Master, must confirm their participation within the deadline and in the manner indicated in the admission communication, under penalty of exclusion, by transmitting to the Scuola Superiore Sant'Anna - U.O. Higher Education the following documents:

- confirmation of participation, signed by the candidate;
- copy of payment of the first installment of € 2,000.00;
- copy of the identity document.
By the deadline indicated for confirmation of participation, candidates admitted with an academic qualification obtained abroad (EU and NON EU countries) are required to submit, in addition to the documentation referred to in the previous paragraph:

- copy of the original degree diploma translated and legalized by the Italian representative responsible for the territory of the country to which the institution that issues the title belongs, if in a language other than English / French / Spanish / German;
- "On-site Declaration of Value" of the qualification obtained abroad issued by the competent Italian diplomatic or consular representations of the country in which they obtained the degree;
- Certificate with the list of exams passed, translated and legalized by the Representation itself.

Admission to the Master of candidates with a foreign qualification obtained in a NON EU country occurs in any case under the condition of verification of the qualification held based on the "Declaration of Value on the spot".

Those admitted subject to the provisions of art. 10 of last paragraph must present, to the Office of the U.O. High Education the self-declaration of the university degree obtained, under penalty of exclusion within one month of graduation.

In order to regularize their participation in the Master, the students, at the beginning of the educational activities, must deliver to the Office of the U.O. Alta Formazione, a revenue stamp worth € 16.00 to be applied to the application form.

**ART. 12 - REGISTRATION FEE**

The registration fee for the Master is set at € 3.500,00, including participation in all lessons, practical exercises, access to the e-learning platform for the entire academic year, teaching material, assistance in developing Project Work and the brand from stamp duty of € 16.00 which will be affixed to the diploma.

Travel expenses, logistic accommodation and board expenses are due by each participant.

The first installment, amounting to € 2.000,00, must be paid upon confirmation of participation following the admission to the Master.

The second installment, amounting to € 1.500,00, must be paid in the way indicated in the admission notice

Payments must be made by bank transfer to the current account held by the Scuola Superiore Sant'Anna at Banca Unicredit S.p.A. Branch of Pisa, Piazza Garibaldi, IBAN IT 32 O 02008 14006 000401272765, with the reason “quota o n. installment (ex. installment) - Master (Enter the title of Master) - surname and first name of the student”.

Contributions may be paid to total or partial coverage of the registration fee by public or private bodies. The assignment of these contributions is based on the merit ranking or any requirements requested by the funding bodies.

In case of renouncement to attend the Master before the beginning of the same, the admitted candidates lose the right to the restitution of the sum paid by way of the first installment or deposit.

In the event of interruption of the master's programme, the admitted candidates are required to regularize the registration fee due up to the time of the interruption of the master.

According to the art. 9 paragraph 2 of the Legislative Decree 68/2012 the School totally exempts students with disabilities, recognized pursuant to art. 3, paragraph 1, of Law 104/1992, equal to or greater than sixty-six percent and applies a reduction of 1.5% for each percentage point of disability to those who have recognized a disability lower than sixty-six percent. The student who intends to take advantage of the exemption or reduction must attach appropriate certification to the online application.
ART. 13 - TITLE ISSUED

At the end of the Master, the School issues, pursuant to art. 3 of the Ministerial Decree 270/2004 and subsequent amendments, the title of second level University Master to the students who have regularly and profitably attended the Master lessons and Stages, according to the requirements of the Disciplinary, and having paid the registration fee.

ART. 14 - COMPETITION PROCESS MANAGER, PERSONAL DATA PROCESSING AND CORRUPTION PREVENTION MEASURES

Pursuant to the provisions of art. 5 of Law 241/90, the person in charge of the insolvency proceedings referred to in this announcement is the Head of the OU. Higher Education - Sant'Anna High School - via Maffi 27, 56127 Pisa - tel. 050/882645 - fax 050/882633 - e-mail: altaformazione@santannapisa.it.

The Sant'Anna School of Advanced Studies operates in compliance with the regulations concerning the prevention of corruption (Law 190/2012) applying the measures identified in the "Three-year plan for the prevention of corruption" published in the "Transparent administration" section of the institutional website at: www.santannapisa.it.

The data controller of the personal data supplied in the context of the insolvency procedure in question is the Scuola Superiore Sant'Anna, in the person of the Rector, Piazza Martiri della Libertà 33 Pisa. The internal manager is designated in the person of Mrs. Roberta Chiordi, roberta.chiordi@santannapisa.it. Please read the information available at the following link: https://www.santannapisa.it/it/alta-formazione-info
Annex A

Master of “UNDERWATER AND HYPERBARIC MEDICINE” VIII edition

<table>
<thead>
<tr>
<th>Master Director</th>
<th>Prof. Vincenzo Lionetti</th>
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<tbody>
<tr>
<td>Start Date</td>
<td>20/04/2020</td>
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<tr>
<td>Ending Date</td>
<td>29/04/2022</td>
</tr>
<tr>
<td>Registration deadline</td>
<td>31/03/2020</td>
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<tr>
<td>Place available</td>
<td>35</td>
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</table>

Education objectives

The main educational objective of the Master, carried out in collaboration with the Institute of Clinical Physiology of the CNR under a specific agreement with the Sant'Anna School, in line with the European Guidelines "Training standards for diving and hyperbaric medicine", developed by the Joint Medical Subcommittee of the European Committee for Hyperbaric Medicine (ECHM) and by the European Diving Technology Committee (EDTC) (2011), is to provide graduates in Medicine and Surgery with specific bio-medical, physical and technological knowledge. This preparation constitutes a solid theoretical-practical basis for the learner to achieve the following specific objectives:

- provide an academic and practical experience for doctors who want to pursue a career as a specialist in underwater and hyperbaric medicine;
- establish a theoretical-practical basis for assessing the psycho-physical aptitudes of candidates for underwater activities that require certification, as well as for organizing, verifying and guaranteeing the suitability of rescue structures, and training in scientific research in the field of underwater and hyperbaric medicine;
- provide practical and operational knowledge to prevent and manage work accidents, in the emerging field of Tunneling operations;
- provide practical and operational knowledge to prevent and manage diving accidents, decompression sickness and diseases that require hyperbaric treatment.

Furthermore, it intends to provide skills to work and direct a hyperbaric implant and to design specialized research protocols. The Master will focus on the most modern technologies and methodologies, with particular emphasis on aspects related to clinical practice.

Teaching and internal articulation.

The educational program of the Master consists of a total of 720 hours organized as follows:

- a 250-hour frontal lessons phase with the recognition of 25 CFU credits characterized by lectures in the classroom and / or registered accessible also via webinar;
- a seminar training phase of 50 hours with the recognition of n. 5 CFU that will be carried out by international experts, at the headquarters of the Scuola Superiore Sant'Anna;
- a phase of online training (on a web e-learning platform) for a total of 120 hours with the recognition of n. 12 CFU;
- 180 hours of hyperbaric medicine stage (9 CFU);
- 100 hours of Underwater Medicine (5 CFU) stage;
- 20 hours of stage in Tunneling assistance (1 CFU);
- Project work (3 CFU)

The practical exercises have the function of integrating the theoretical training by a direct operational experience.

Within the hyperbaric stage activities, the Master also includes participation in:
- course on Treatment of Gases for Medical Use provided by the company SIAD (Italian Acetylene and Derivatives Company) of the international Praxair group at the
Avenza site);

In addition to the training course dedicated to doctors operating in Italy, according to the aforementioned structure, an e-learning training course will be active (450 hours in English; WEB platform), dedicated to a maximum number of 10 EU and non-EU doctors who will enroll in the selections for the Master and will carry out the practical phase at international level centers by specific agreements with the Sant'Anna School of Advanced Studies and in collaboration with the Institute of Clinical Physiology of the CNR.

At the end of this e-learning course, the CFU will be recognized only after a series of exams have been completed, the methods of which will be defined in agreement with the Sant'Anna School of Advanced Studies and in collaboration with the CNR Clinical Physiology Institute.

<table>
<thead>
<tr>
<th>University Education Credits (CFU)</th>
<th>The achievement of the Master gives the right to the recognition of a maximum of 60 university formative credits (CFU). To obtain the Master's diploma, the acquisition of at least 60 credits is required.</th>
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<tbody>
<tr>
<td>Selection Criteria</td>
<td>The evaluation of the titles (max 50 points) will be based on the following parameters:</td>
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<tr>
<td></td>
<td>a) University title: years used for graduation, final grade (average exams taken for undergraduates), specialization diploma; other specialization diplomas: maximum 20 points (divided as follows: up to a maximum of 5 points for the graduation grade, up to a maximum of 5 points for the specialization diploma, up to a maximum of 4 points for the years employees, up to a maximum of 3 points for the average exams taken, 1 point for each additional specialization diploma up to a maximum of 3 points.</td>
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<td>b) Other qualifications: research activities, publications and professional experience in the field of Underwater Medicine and / or Hyperbaric Medicine; of Anesthesia and Resuscitation and / or Intensive Care and / or Emergency Medicine and / or Sports Medicine; post-graduate training; maximum 20 points (divided as follows: up to a maximum of 5 points for post-graduate training, up to a maximum of 5 points for professional experience, 1 point for each research work up to a maximum of 3 points, 1 point for each patent) up to a maximum of 2 points, up to a maximum of 5 points for other certifications attesting experiences in underwater / hyperbaric activities).</td>
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<td></td>
<td>c) Motivational profile: maximum 10 points;</td>
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<td></td>
<td>d) Only candidates who have obtained a score of 25 points or more in the evaluation of qualifications will be admitted to the next oral exams.</td>
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</table>

The interview and / or the aptitude test (max 50 points) will be finalized to ascertain the specific aptitudes.

<table>
<thead>
<tr>
<th>Registration fee and payment methods</th>
<th>The registration fee for the Master is set at € 3,500.00. The payment by installments is scheduled as follows:</th>
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<tbody>
<tr>
<td></td>
<td>• The first installment of € 2,000.00, must be paid upon confirmation of participation following admission to the Master.</td>
</tr>
<tr>
<td></td>
<td>• The second installment of € 1,500.00, must be paid in the manner indicated in the admission notice</td>
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| Contributions and allocation methods | The School totally exempts students with disabilities from the registration fee, recognized pursuant to art. 3, paragraph 1, of Law 104/1992, equal to or greater than sixty-six percent and applies a reduction of 1.5% for each percentage point of invalidity to those who have recognized a disability lower than sixty-six percent. The student who intends to take advantage of the exemption or reduction must attach appropriate certification to the online application. |

| Contacts | U.O. Alta Formazione | Email: altaformazione@santannapisa.it | Tel: 050882645 |