UNIVERSITÀ DEL SALENTO
DIPARTIMENTO DI SCIENZE E TECNOLOGIE BIOLOGICHE E AMBIENTALI

MANIFESTO DEGLI STUDI A.A. 2022/2023

Corso di laurea magistrale in

COASTAL AND MARINE BIOLOGY AND ECOLOGY
(BIOLOGIA ED ECOLOGIA COSTIERA E MARINA)

cl. LM-6

(approvato con Decreto n. 442 prot. n. 81946 del 1/6/2022 del Direttore del DiSTeBA e aggiornato con Decreto n. 591 prot. n. 133321 del 27/7/2022 del Direttore del DiSTeBA)

UNIVERSITÀ DEL SALENTO
DIPARTIMENTO DI SCIENZE E TECNOLOGIE BIOLOGICHE E AMBIENTALI
MANIFESTO DEGLI STUDI A.A. 2022/2023

Master Course in "Coastal and Marine Biology and Ecology"
Class LM-6

(Master course entirely taught in English language)

General Information

Designed for students passionate of marine life and ecosystems, seeking for high professional qualification at international level, the Coastal and Marine Biology and Ecology (CMBE) Master Course delivers qualified education on fundamental and applied biological and ecological marine sciences, aiming at understanding of the phenomena at various scales in coastal, transitional, and marine ecosystems (see video at https://www.unisalento.it/web/10122/320).

CMBE is a two-year, second level course (according to Decree of Italian Educational, Universities and Research Ministry n. 270/2004) without a programmed number of enrolled students. As specified within the annual CMBE Manifesto for Educational Activities, enrolment to the Course requires the possession of specific curricular requisites and the positive evaluation of the personal preparation of the applicant, according to the terms yearly published in the admission call. To obtain the final qualification, a student must achieve a minimum of 120 CFU's (University Formative Credits) including 30 CFU's related to the final verification test. This is related to reporting about internship or research work experience previously approved by the Academic Biology Council - at public or private research institutions, Universities, or companies.

The CMBE Master of Science foresees two curricular programs:

- ***Marine Biology and Ecology (MBE)***
- ***E-Biodiversity and Ecosystem Sciences (EBES)***

Students enrolled to the MBE curriculum will have the opportunity in the second year of training to choose for a double-degree special program, made possible by the Agreement in force with the University of Lille (France) and the availability of dedicated ERASMUS+ fellowships. During the course of the second year, these students will spend 6 or 12 months at the University of Lille to a) attend courses and give exams (only first semester of the second year), or b) work in a lab for their final thesis work (only second semester of the second year), or c) attend courses, give exams and work in a lab for their final thesis work (both first and second semester of the second year). In Italy, this is the first marine biology course entirely taught in English and the only one delivering a double Master degree by the recent agreement (March 2017) between the University of Lille and the University of Salento. Each year, five selected students of the University of Salento can get a fellowship to spend 6 to 12months of the second academic year in France, at University of Lille. This period will entitle these students to achieve two master degrees (one from University of Salento, Lecce, and one from the University of Lille, instead of a single degree (*https://bit.ly/MBE_DOUBLE_DEGREE*).

Students enrolled to the EBES curriculum will be involved in mobility programs within the LifeWatch ERIC network for at least 6 months, taking advantages of dedicated LifeWatch ERIC travel fellowships or belonging to the ERASMUS+ program. The mobility of the EBES students will also occur in the second year.

The CMBE faculty members are involved in several European research projects. These links and the ERASMUS+ program jointly provide our students superb opportunities to spend up to 12 month- mobility periods abroad, and to fulfil a master thesis in prestigious European research institutes. In this context, students from all over Italy and abroad find a stimulating training environment, including practical applications, making the course a true international laboratory.

The main occupational perspectives deal with research and consultancy work in public bodies and private companies in the field of conservation and management of coastal and marine ecosystems, management of protected areas, assessment of the environmental health status and risks. Also, the CMBE degree opens the access to postgraduate and PhD courses in several areas of Marine Sciences. The availability of a 14-m long research boat and terrestrial vehicles equipped for the different types of sampling activities represent further support to the need of gaining the practical skills typically requested by the international job market.

For the achievement of the CMBE academic title, students must acquire at least 120 ECTS (European Credit Transfer System) equivalent to 120 Italian CFUs (Crediti Formativi Universitari).
Each ECTS corresponds to 25 hours of learning activities, alternatively organized as follows:

- 8 hours of theoretical lectures + 17 hours of individual study of the student;
- 12 hours of laboratory activity (*practicals*) + 13 hours of personal re-elaboration of practical lab activities;
- 25 hours of personal traineeship training or final exam preparation.

Educational activities

The Master Course in Coastal and Marine Biology and Ecology includes 5 *categories of learning activities (*"B": Core subjects in various disciplines of biology; "C": Training activities in disciplines related to biology and consistent with the educational objectives of the course, plus an integrated interdisciplinary training; "D": Activities chosen by the student; "E": Training activities aimed at preparing the final examination for the attainment of the qualification; "F": Training activities to facilitate the professional choices through direct knowledge of the business sector the diploma may give access to, including, in particular, internships, apprenticeships and guidance) listed in Annex n. 1.

Concerning typology D of learning activities (second year of the course, 12 ECTS/CFU), these may coincide with the teaching/training activities of any one of the University's degree programs, provided that they are consistent with the student's CMBE training plan and subject to the approval of the Academic Council of CMBE, or with activities related to the preparation of the final elaboration, and external apprenticeship activities.

Learning activities offered in the academic year 2022/2023 at the different University of Salento Course Programs are available on-line at the following link https://studenti.unisalento.it/Guide/PaginaRicercaInse.do. A general overview (in English language) of graduate programs is available at http://international.unisalento.it/graduate-programmes/.

The students will also have the opportunity to gain up to optional 9 ECTS/CFU ("Other Activities chosen by the student") in other disciplines (also outside the above learning areas and outside the proposed cognate activities as well as outside their specific curriculum). Indeed, students belonging to one CMBE curriculum will have the opportunity to choose up to 9 ECTS/CFU as any teaching module of the other CMBE curriculum as well as from a different master course. For instance, the Academic Council suggests the selection of the learning activity named "Zoologia applicata alla conservazione e gestione dei sistemi naturali" (SSD BIO/05, 6 ECTS/CFU, in Italian language) offered at the University of Salento in the framework of the Laurea Magistrale in Scienze Ambientali (cl. LM-75).

Considering that a practical, operative and adequate training has to provide the essential skills of a specialized biologist in the field of coastal and marine biology and ecology, the students will also have the opportunity to obtain the 9 ECTS/CFU of the "Other Activities chosen by the student" attending practical activities/courses. Therefore, the CMBE course student may carry on external activities, such as formative trainings with firms, public administration structures (e.g. Marine Protected Areas) and laboratories, and/or stages with Italian and foreign universities, also within the framework of international agreements (e.g. the European Network Euromarine); as well as practical classes in classrooms and/or in the field, training stages in national and foreign Universities (particularly those involved in double degree programs). Any of the chosen activities must be coherent with the objectives of the course, aiming at developing an integrated, interdisciplinary formation and they will be acknowledged by an adequate number of ECTS (formative credit units), upon approval of the Academic Board as "Other Activities chosen by the student" - up to the maximum of 9 CFU.

Also, the Academic Council strongly encourages the participation to ERASMUS+ program to carry out internships, training activities, or research work experience abroad. This will be also acknowledged by 1 additional point to the scoring of the final exam.

Each student can include in the study plan either the training activities proposed in this *Manifesto* (to be selected by the on-line procedure on the Student Web Portal) or any other learning activities elsewhere offered in academic year 2022/2023.

Following enrolment, each student must fill the online curriculum provisionally selecting one or more activities of D type (up to 12 ECTS/CFU) among those proposed by the Academic Council. Then, by 31 January 2023, the student must submit to the Secretariat (Ecotekne Congress Centre, first floor) a paper form listing the preferred D-type learning activities (others than those available on the on-line portal) to replace the previously selected activities. This list will be subject to the approval of the Academic Council.

The deadline of 31 January 2023 is postponed to May 15th, 2023 for those who enroll following the entrance exam of April 2023.

The temporal sequence of learning activities proposed in the Manifesto of the CMBE course is suggested to the student for the examinations. Attendance to lectures is not compulsory, even though it is a key condition granting a fruitful, smooth educational training of the CMBE student. Students, furthermore, are bound to attend laboratory activities, stages, seminars and trainings for at least 2/3 of their duration.

Class calendar
Teaching activities are organized in two semesters:

- I semester: 3 October 2022 - 20 January 2023
- II semester: 6 March 2023 - 9 June 2023

Acquisition of CFU and Exams
All activities that allow ECTS acquisition are subject to evaluation. Assessment procedures are made, as appropriate, by written, or oral, or written and oral examinations, or by other procedures suitable for particular types of activity. The activities of type B, C and D are usually evaluated by appraisal in thirtieth, up to thirty *cum laude*, witnessing student's excellence. For teaching activities involving laboratory exercises, accreditation may be made through evaluation of individual work on subjects related to ongoing exercise, the details of which are given by the instructor and approved by the body responsible for Competent Teaching. The methods for the above tests are set by resolution of the Competent Body Learning (Academic Council) and illustrated by the instructor at the beginning of the course.

Exams are scheduled as follows (only during periods of suspension of learning activities):

- 3 sessions in the period 23/1/2023 – 04/3/2023
- 3 sessions in the period 12/6/2023 – 29/7/2023
- 1 session in the period 01/9/2023 – 30/9/2023

In each of the months of November, March and May, an extraordinary session will also be held, reserved for off-course students and graduating students. Extraordinary exams can also be accessed by students enrolled in the last year of the degree course starting from the second semester, during which no teaching is provided. Therefore, students of the second year of the Master's degree program will be able to participate in the extraordinary exams starting from March of the second academic year. Students enrolled in the current second year of the Master's Degree in Biology will also be able to take advantage of any additional extraordinary exams during the second semester, directly agreed with the teachers of the individual disciplines.

Students near to graduation (*graduands*) may request supplementary exam sessions before the session of graduation, if no ordinary sessions are scheduled in the four weeks preceding the date of the final degree session.

To be considered *graduands*, students must:

a. have applied for graduation according to the terms fixed by the Student Secretariat;
b. have a maximum of remaining 15 ECTS to complete their educational path (this does not include the ECTS allocated for the training period - also known as *stage* - and final thesis work).

All exams scheduled after 30 April 2023 will be referred to the summer session of the academic year 2021/2022 and NOT as special session of the academic year 2022/2023.

The acquisition of ECTS of type f) concerning internships or work experience - previously cleared by the Academic Council - at research institutions or universities, public or private companies, may be based on an activity report and does not provide an associated vote, but only an assessment of fairness expressed by the Academic Council.

Sessions Degrees
Graduation sessions are planned in the following periods:

-
- 18-20 July 2023
- 10-12 October 2023
- 12-14 December 2023
- 12-14 March 2024
- 16-18 April 2024

Final Test
The final test for the achievement of the Master Degree in Coastal and Marine Biology and Ecology consists in the public presentation and discussion, in front of an appointed commission, of a written text (Thesis work). The topic will be agreed upon with a member of the teaching staff of the CMBE course and it may involve also external tutors. Special requirements are foreseen for the achievement of the double degree, as described in the Double Degree Agreement (*https://bit.ly/MBE_DOUBLE_DEGREE).*

Further information can be found at the DiSTeBA website https:/disteba.unisalento.it

Knowledge required for access to the course, procedures for verifying the preparation of the student, employment and professional opportunities for graduates
Refer to the Degree Course website:
https://www.unisalento.it/didattica/cosa-studiare/corsi-di-laurea-magistrale/-/dettaglio/corso/LM51/coastal-and-marine-biology-and-ecology

Rules of admission to the Course
The terms will be established at the beginning of each academic year and will be made explicit in the admission notification.

Università del Salento - DiSTeBA
Corso di Laurea Magistrale in Coastal and Marine Biology and Ecology (Biologia ed Ecologia Costiera e Marina) - LM51 cl. LM-6
Curr. MBE (Marine Biology and Ecology)
Offerta didattica erogata a.a. 2022/2023

I anno (Rif. Immatricolati a.a. 2022/2023)

Nome Insegnamento	Tipo Insegnamento (Monodisciplinare / Integrato / Modulo)	CFU complessivi	CFU lezione	CFU esercitazione / laboratorio	Ore lezione	Ore esercitazione	Ore complessive attività frontale	SSD	TAF	Ambito	Responsabile Didattico	Docente	Docente di riferimento	Semestre
Ecological indicators and biomonitoring	Monodisciplinare	6	3	3	24	30	54	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	Pinna Maurizio	Pinna Maurizio	SI	II
Ecology and Biology of Transitional Waters	Modulo di Ecology and Biology of Transitional and Marine Waters	6	4	2	32	20	52	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	Pinna Maurizio	Pinna Maurizio		II
Marine Biology	Modulo di Ecology and Biology of Transitional and Marine Waters	6	5	1	40	10	50	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Pinna Maurizio	Rossi Sergio	SI	I
Community Ecology	Monodisciplinare	6	3	3	24	30	54	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	Mancinelli Giorgio	Mancinelli Giorgio	SI	I
Environmental microbiology	Monodisciplinare	6	6	----	48		48	BIO/19	Caratterizzante	Discipline del settore biomolecolare	Alifano Pietro	Alifano Pietro		I
Marine life cycles and symbiotic associations	Monodisciplinare	8	6	2	48	20	68	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Belmonte Genuario	Belmonte Genuario		I
Pelagos Biology (Zooplankton and Necton)	Monodisciplinare	8	7	1	56	10	66	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Belmonte Genuario	Belmonte Genuario	SI	II
Biodiversity of coastal and marine vegetation	Monodisciplinare	10	7	3	56	30	86	BIO/02	Caratterizzante	Discipline del settore biodiversità e ambiente	Zuccarello Vincenzo	Zuccarello Vincenzo	SI	II
Oceanography of Marginal Seas and of the Coastal Zone	Monodisciplinare	6	6	----	48		48	GEO/12	Affine/Integrativa	Attività formative affini o integrative	Lionello Piero	Lionello Piero		II

II anno (Rif. Immatricolati a.a. 2021/2022)

Nome Insegnamento	Tipo Insegnamento (Monodisciplinare / Integrato / Modulo)	CFU complessivi	CFU lezione	CFU esercitazione / laboratorio	Ore lezione	Ore esercitazione	Ore complessive attività frontale	SSD	TAF	Ambito	Responsabile Didattico	Docente	Docente di riferimento	Semestre
Environmental Physiology	Monodisciplinare	6	5	1	40	10	50	BIO/09	Caratterizzante	Discipline del settore biomedico	Lionetto Giulia	Lionetto Giulia		I
Marine Biodiversity and Ecosystem Functioning	Monodisciplinare	6	6	----	48	---	48	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Rossi Sergio	Rossi Sergio	SI	I
Experimental design and methodologies for marine biology	Monodisciplinare	6	3	3	24	30	54	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Luigi Musco	Luigi Musco (2 CFU: 1+1) Sergio Rossi (2 CFU: 1+1) Giulia Furfaro RTDa (2 CFU: 1+1)	SI (MUSCO) SI (ROSSI)	I
Enviromental chemistry	Monodisciplinare	6	5	1	40	10	50	CHIM/12	Affine/Integrativa	Attività formative affini o integrative	Genga Alessandra	Genga Alessandra		I
Activities Chosen by the Student		9							A scelta dello studente	A scelta dello studente				---
Ethical, economics and normative aspects		1							Altro	Altre conoscenze utili per l'inserimento nel mondo del lavoro				II
Final Test		30							Lingua/Prova finale	Per la prova finale				---

Gruppo di scelta da 6 CFU nell'ambito delle discipline del settore biodiversità e ambiente

1 "CFU lezione" corresponds to nr. 8 hours of frontal lectures in the classroom
1 "CFU esercitazione/laboratorio" corresponds to n. 10 hours of practical activities

Periodi di erogazione delle attività didattiche:		
I	03/10/2022	20/01/2023
II	06/03/2023	09/06/2023

Università del Salento - DiSTeBA
Corso di Laurea Magistrale in Coastal and Marine Biology and Ecology (Biologia ed Ecologia Costiera e Marina) - LM51 cl. LM-6
Curr. EBES (E-Biodiversity and Ecosystem Sciences)
Offerta didattica erogata a.a. 2022/2023

I anno (Rif. Immatricolati a.a. 2022/2023)

Nome Insegnamento	Tipo Insegnamento (Monodisciplinare / Integrato / Modulo)	CFU complessivi	CFU lezione	CFU esercitazione / laboratorio	Ore lezione	Ore esercitazione	Ore complessive attività frontale	SSD	TAF	Ambito	Responsabile Didattico	Docente	Docente di riferimento	Semestre
EVOLUTIONARY BIOLOGY	Monodisciplinare	6	4	2	32	20	52	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Luigi Musco	Luigi Musco	SI	II
THEORETICAL ECOLOGY	Monodisciplinare	6	6		48	0	48	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	Alberto Basset	Alberto Basset		I
PLANT BIODIVERSITY	Monodisciplinare	6	6		48	0	48	BIO/02	Caratterizzante	Discipline del settore biodiversità e ambiente	Vincenzo Zuccarello	Vincenzo Zuccarello	SI	II
Community Ecology	Monodisciplinare	6	3	3	24	30	54	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	Giorgio Mancinelli	Giorgio Mancinelli	SI	I
BIODIVERSITY AND ECOSYSTEM FUNCTIONING	Monodisciplinare	6	6		48	0	48	BIO/05	Caratterizzante	Discipline del settore biodiversità e ambiente	Sergio Rossi	Sergio Rossi	SI	I
FUNDAMENTALS OF ECOLOGICAL INFORMATICS	Monodisciplinare	6	6		48	0	48	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	*Docente a contratto gratuito*	*Docente a contratto gratuito*		II
Environmental microbiology	Monodisciplinare	6	6	----	48		48	BIO/19	Caratterizzante	Discipline del settore biomolecolare	Pietro Alifano	Pietro Alifano		I
Environmental Physiology	Monodisciplinare	6	5	1	40	10	50	BIO/09	Caratterizzante	Discipline del settore biomedico	M.Giulia Lionetto	M.Giulia Lionetto		I
Environmental chemistry	Monodisciplinare	6	5	1	40	10	50	CHIM/12	Affine/Integrativa	Attività formative affini o integrative	Alessandra Genga	Alessandra Genga		I
MATHEMATICAL MODELLING IN ECOLOGY	Monodisciplinare	6	6		48	0	48	SECS-S/02	Affine/Integrativa	Attività formative affini o integrative	Serena Arima	Serena Arima		II

II anno (Rif. Immatricolati a.a. 2021/2022)

Nome Insegnamento	Tipo Insegnamento (Monodisciplinare / Integrato / Modulo)	CFU complessivi	CFU lezione	CFU esercitazione / laboratorio	Ore lezione	Ore esercitazione	Ore complessive attività frontale	SSD	TAF	Ambito	Responsabile Didattico	Docente	Docente di riferimento	Semestre
LABORATORY OF ECOLOGICAL INFORMATICS	Monodisciplinare	10	10		80	0	80	BIO/07	Caratterizzante	Discipline del settore biodiversità e ambiente	Giorgio Mancinelli	Giorgio Mancinelli: 4 CFU Docente a contratto gratuito: 6 CFU		I
Activities chosen by the Student		9							A scelta dello studente	A scelta dello studente	---	---		
Ethical, economics and normative aspects		1							Altro	Altre conoscenze utili per l'inserimento nel mondo del lavoro	---	---		II
Final Test		40							Lingua/Prova finale	Per la prova finale	---	---		

1 "CFU lezione" corresponds to nr. 8 hours of frontal lectures in the classroom
1 "CFU esercitazione/laboratorio" corresponds to n. 10 hours of practical activities

Periodi di erogazione delle attività didattiche:		
I	03/10/2022	20/01/2023
II	06/03/2023	09/06/2023