SCHEMA OF TEACHING ORGANIZATION ACCORDING TO D.M. 270/04
COURSE COASTAL AND MARINE BIOLOGY AND ECOLOGY (LM51, Cl. LM-6)
A.A. 2012-2013

GENERAL DATA	
Università del Salento	
Faculty	MATHEMATICAL, PHYSICAL AND NATURAL SCIENCES
Class	LM-6
Name of the course	Coastal and marine biology and ecology
Service Office	UNIVERSITA' DEL SALENTO
Course council (MEMBERS)	**FULL PROFESSORS:** 1. BASSET ALBERTO 2. BELMONTE GENUARIO 3. BOERO FERDINANDO 4. DALESSANDRO GIUSEPPE 5. DE BELLIS LUIGI 6. DI JESO BRUNO 7. SCHETTINO TRIFONE 8. STORELLI CARLO 9. ZARA VINCENZO **ASSOCIATE PROFESSORS:** 10. BOZZETTI MARIA PIA 11. CICCARESE ANTONELLA 12. DE DONNO ANTONELLA 13. GIANGRANDE ADRIANA 14. LIONELLO PIERO 15. NICOLARDI GIUSEPPE 16. PERROTTA CARLA 17. PIRAINO STEFANO 18. VILELLA SEBASTIANO **RESEARCHERS:** 19. ALBANO ANTONELLA 20. CRETI' PATRIZIA 21. DAMIANO FABRIZIO 22. EPIFANI ERBANA 23. FERRAMOSCA ALESSANDRA

	24. GIUDETTI ANNA MARIA 25. GUIDETTI PAOLO 26. LENUCCI MARCELLO SALVATORE 27. MANCINELLI GIORGIO 28. MASSARI SERAFINA 29. MICELI ANTONIO 30. MONTEFUSCO ANNA 31. PAGLIARA PATRIZIA 32. PINNA MAURIZIO 33. RAMPINO PATRIZIA 34. TALA' ADELFIA **STUDENTS REPRESENTATIVES:** 35. BISCONTI FRANCESCA 36. BISCONTI FRANCESCO 37. MAROTTA PIETRO 38. MARTINA FRANCESCO MARIA 39. ORRICO DAVIDE 40. RICCI PASQUALE 41. TOLOMEO FRANCESCO
Head of Corso di Laurea Council	VILELLA SEBASTIANO
Web Site	https://www.scienzemfn.unisalento.it
Specific formative objectives of the course and description of the formative studies	Graduates in the *Corso di Laurea Magistrale* in Coastal and Marine Biology and Ecology must possess a solid cultural preparation in basic biology, and in the various sectors of applied biology aimed at the understanding of the ecological phenomena that are realized at the level of the various scales in coastal, transitional, and marine ecosystems. Since all courses will be in English, graduates Coastal and Marine Biology and Ecology must be proficient in scientific English. For the above reasons, teaching is aimed at preparing graduates that must: have a deep knowledge of the biology and ecology of coastal and marine ecosystems; have a deep knowledge of sampling techniques, of analytical instruments, and of the techniques of data acquisition and analysis; have an advanced knowledge of supporting statistical, mathematical, and informatics instruments; master the scientific method;

	be able to use the acquired knowledge to tackle applied problems in the control, conservation, and management of biodiversity, of the functioning of coastal and marine ecosystems, and of the goods and services they provide; be able to use the English language fluently, both in written and oral form, with special reference to scientific English; be able to work in full autonomy, also being responsible of projects and structures. In order to provide these skills, the Corso di Laurea Magistrale envisages activities aimed at: - acquiring deep knowledge on the biology and ecology of coastal and marine ecosystems; - activities in disciplines related to biology and ecology and coherent with the objectives of the course, so to integrate an interdisciplinary formation. In order to provide a practical, operative and adequate training to provide the essential skills of a specialized biologist, the course includes: - 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 of Excellence on Marine Biodiversity and Ecosystem Functioning). - practical classes in classrooms and/or in the field.
Expected learning results, expressed by the European Descriptors of the qualification	**Knowledge and understanding** All disciplines, characterizing, related and supplementary concur to the acquisition of theoretical and operational skills with special reference to: - biological mechanisms at the basis of structure, organization and functioning of ecosystems; - conceptual foundations of the bio-ecology of coastal and marine ecosystems; - relationships between structural biodiversity and the function of the processes, goods and services of coastal and marine ecosystems; - factors that influence ecosystem health, and instruments for their control; Ecotechnology applied to monitoring, risk evaluation and impact evaluation. The transfer of knowledge will take place through frontal teaching in the classroom and through supplementary seminars. Knowledge acquisition and comprehension abilities will be checked by exams (either oral or written), qualifying colloquia, and tests. **Applying knowledge and understanding** All disciplines, characterizing, related and supplementary concur to the acquisition of specific skills on: - Statistical-mathematic and biological-ecological methodologies to develop both basic and applied research on coastal and marine ecosystems;

	- macro and micro morphological aspects, eco-physiological and biochemical mechanisms, biological and ecological interactions basic to the organization of biodiversity and the functioning of ecological processes at different scale levels; - theoretical-experimental and methodological aspects at the basis of the development of applications in the field of control, monitoring, conservation and management of marine and coastal ecosystems; Laboratory classes supplementary to theoretical courses and guided personal studies are also scheduled to reach these objectives. The check of the acquisition of applied capacities will take place by oral and/or written examinations (report on the complied analytical activities). **Making judgements** In terms of acquisition of conscious judgement autonomy with reference to: collection, evaluation and interpretation of laboratory experimental data (choice and use of suitable instruments and investigations for a specific research); laboratory security (security forms, sanitary surveillance, regulations and legislation); principles of professional deontology and scientific approaches to bioethical problems. Skill acquisition will be obtained through lectures and seminars by expert lecturers and/or specialized personnel, by final check through tests and/or written reports. **Communication skills** In terms of acquisition of adequate competences and instruments for both written and oral communication; elaboration and presentation of experimental data; ability of team work; transmission and spread of information on biological themes in the current environmental sector. Practical classes include also the use of informatics instruments and of scientific texts and/or articles in a foreign language (English), with group and individual work. The skills for data elaboration and presentation, for the capability of team work, for the transmission and spread of information on biological themes will be mainly acquired during a period of stage (at either private or public research and analysis laboratories, firms, companies and professional orders) and during the preparation of the final exam (the writing of the final essay and the exposition of results), when the verification of the acquisition of these skills will be carried out. **Learning skills** In terms of acquisition of adequate competences for the development and the advancement of further competence about: consultation of bibliographic material, consultation of data banks and other web information, basic cognitive instruments for the continuous update of own knowledge. These skills will be mainly acquired during the stage period and during the accomplishment of the final essay, during which the acquisition of these skills will be checked.

Occupational and professional opportunities for the graduates	As far as placement in the job market is concerned, the figure of doctor in coastal and marine biology and ecology is referred, according to the ISTAT classification to the figures of: 2 Intellectual, scientific and of high specialization professions; 2.3 - Specialists in the life sciences; 2.3.1 Specialists in the life sciences; 2.3.1.1 Biologists, botanists, zoologists and similar professions. The main occupational perspectives envisaged for this Course of Study comprise managerial and productive activities in many different frameworks, such as: conservation and management of coastal and marine ecosystems, management of protected areas, monitoring of the health of ecosystems and ecological risk analysis. This Course of Study, furthermore, provides the cultural basis to access to Graduate Courses and to Specialization Schools in pertinent sectors.
The course prepares for the profession of	Ecologists – (2.3.1.1.7) Zoologists – (2.3.1.1.6)
Required knowledge to access	Admission to the Master's Degree (Corso di Laurea Magistrale) in Coastal and Marine Biology and Ecology requires the possession of a three-year degree or a three-year university diploma, or any other title obtained abroad and recognized as suitable. To be enrolled in the Master's Degree in Coastal and Marine Biology and Ecology, candidates must possess the following curricular requisites (expressed in terms of CFU – University Formative Credits – referred to the groups of sectors listed below): 1) GROUP 1 (BIO01, BIO02, BIO03, BIO05, BIO07): from 10 to 40 2) GROUP 2 (BIO06, BIO09, BIO10, BIO18, BIO19): from 10 to 20 3) GROUP 3 (MAT05, MAT06, MAT07, CHIM03, CHIM06): from 5 to 20 To be admitted to the following evaluation of the adequacy of their personal preparation, candidates must have at least 60 CFU's (calculated as the sum of the possessed CFU in the three disciplinary groups reported above). In addition to the requisites listed above, students must also possess at least 3 CFU's regarding the knowledge of the English language. This knowledge will be evaluated during the test of the initial preparation. These requirements are not applicable to English mother-tongue students. The required curricular requisites refer to basic knowledge.
Modalities of verification of initial preparation	To verify the adequacy of the personal preparation for the admission to the Master's Degree (art. 6, par. 2 and art. 11 par. 7 of the DM of 16 march 2007), each student will have to pass an oral admission test aimed also at verifying his/her knowledge of the English language. The terms will be established at the beginning of each academic year and will be made explicit in the

	admission notification.
Sustainable number of users	80
National access programming	No
Local access programming (insert motivation according to Law 264/999)	No
Modalities for transfers from other Courses of Studies	Enrolments will be regulated by the procedure reported in the admission notification.

EDUCATIONAL PATH	
Curricula (number and name)	None
Rules for the presentation of the individual Study Plans	The Study Plan is regulated by the Faculty of Mathematical, Physical and Natural Sciences. Moreover, in the case of students who moved from another University or from another Course of Studies, the Didactic Council of Biology reserves the possibility of evaluating individual study plans by taking into account the required requisites by D.M. 270/04. Regarding **the formative activities that students can choose**, these (as expressly provided for by DM 270/04) can be represented both by courses of any Study Course of the University, provided they are coherent with the student's formative track, and by activities connected with the preparation of the final elaborate and/or the stage. The formative activities chosen by students must be communicate according to the procedure and the deadline specified in the "Manifesto degli Studi".

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Courses list	
Name of course	*Specific formative objectives*
Systematic Botany (BIO/02, 6 CFU) [Module of the integrated course *Systematic Botany and Quantitative Plant Ecology*]	Acquisition of basic knowledge in biodiversity of plants, in that fungi and their photosynthetic symbionts, Their collection and taxonomic recognition techniques.
Quantitative Plant Ecology (BIO/03, 6 CFU) [Module of the integrated course *Systematic Botany and Quantitative Plant Ecology*]	The aim of the course is to describe the main methods of analysing field data on vegetation. Course outline: introduction, vegetation data, information and diversity measures, data transformation, correlation-covariance and distance and resemblance measures, classification and cluster analysis, ordination methods
Pelagos Biology (Zooplankton and Necton) [BIO/05, 8+2 CFU]	Acquisition of basic knowledge on zoo plankton and necton systematics, life cycles, life histories, behaviour, ecology, geographic distribution, to understand the marine biodiversity and links existing among living beings into the sea in an evolutionary perspective. Acquisition of practise to program and carry out a study on pelagic communities of living organisms.
Marine Biology and Ecology [BIO/05, 6 CFU]	Knowledge on the bio-ecology of marine organisms, communities, and ecosystems. Main compartments and connections of marine systems, main principles governing their functioning from the individual to the ecosystem level. Practical lectures are aimed at inspiring team work in a collaborative way, with a problem-solving attitude.
Life Cycles and Development [Integrated course whose modules are: *- Development and evolution* *(BIO/05, 4+1 CFU)* *- Life cycles and ecology* *(BIO/05, 4+1 CFU)*	The course will provide advanced knowledge on marine invertebrate ontogeny and life cycle diversity, with emphasis on a) ecological implications (role of reproduction and recruitment of marine benthic invertebrates in explaining spatial and temporal population dynamics and community assembly rules.); b) comparative analysis of basic developmental patterns; c) bauplan evolution and the universality of fundamental genetic tool kits.

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Biology and Ecology of Transitional Waters [BIO/07, 4+2 CFU]	Acquisition of the knowledge on the ecological determinants and the emergent properties of transitional water ecosystems, as ecotones among terrestrial, freshwater and marine ecosystems Achievement of the ability to describe their environmental niche, biological structure and biodiversity, Functioning of ecosystem processes and goods and services provided. Achievement of the methodological tools to study transitional water ecosystems and to assess their ecological status.
Community Ecology [BIO/07, 5+1 CFU]	An overview of the history and concepts of community ecology will be provided, together with an in-depth analysis of: i) macro-ecology and community assembly; ii) metabolic theory of ecology; iii) food web theory. The final section of the course will focus on statistical methods currently used to analyze community data. The objectives are to provide a survey of current topics in community ecology, to evaluate each topic to understand the factors that generate the structure of natural communities.
Biological Indicators and Biomonitoring [BIO/07, 5+1 CFU]	The course provides knowledge about biological and ecological indicators, functional and structural, taxonomic and non taxonomic, and methodologies and applications used in assessing the ecological quality of the ecosystems. The topics will provide the theoretical principles to the students, referring to the basic concepts of ecology, underpinning the development and application of biological indicators in relation to the requirements of the latest national legislation and European directives.
Environmental Physiology [BIO/09, 5+1 CFU]	The objective of the course is to provide students the basic knowledge of the environmental physiology (physiological responses to the variability of the environmental factors), and to gain a sound background in the physiological responses of animals to environmental pollutants and in their application in the ecotoxicological monitoring.
Environmental Microbiology [BIO/19, 6 CFU]	Classification of microbes. Microbial environments. Bacteria in biogeochemical cycles. Microbial loop. Bacterial respiration. Sample collection, processing and analysis. Bacterial communities and diversity: cultural, morphological and biochemical methods; culture-indipendent methods. Enhanced bacterial cultivation. Waterborne pathogens, microbial risk assessment. Vibrios in environmental samples. Bacterial bioremediation. Environmental biotechnology.
Climatology of Marginal Seas and of the Coastal Zone [FIS/06, 6 CFU]	The objectives of the lectures are: - to introduce concepts and methods of the climatology of the coastal zone and of marginal seas. - to describes processes responsible for salinity, temperature, transport processes, and sea level variability. - to describe the specific characteristics of the Mediterranean Sea with respect to world oceans. - To introduce recent changes of the climate of the Mediterranean Sea and surrounding region and tools for future scenario construction.

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Organic Chemistry of Coastal and Marine Ecosystems [CHIM/06, 6 CFU]	To give knowledge on naturally occurring and anthropogenic chemical components and their biological interactions in coastal and marine ecosystems. This aim is supported by theoretic lessons and practical laboratory experiences including isolation, structural elucidations and quantitative/qualitative chemical analysis of these organic compounds and their secondary metabolites.
In reference to single CFU: - ***N. 17 hours dedicated to individual study / N. 8 hours dedicated to assisted activities during frontal lectures in the classroom*** - ***N 13 hours dedicated to individual study / N. 12 hours dedicated to assisted activities during practical***	
Other formative activities	
Activities chosen by the student	
Foreseen CFU	9
Specific Formative Objectives	To complete the formation linked to basic and characterizing disciplines.
Foreign languages	
Foreseen CFU	none
Modalities of knowledge check	
Specific formative objectives	
Stage	
Foreseen CFU	none
Modalities of knowledge check	
Specific formative objectives	
Periods of study abroad	
Foreseen CFU	none
Modalities of results check	
Specific formative objectives	
Other (ethical, economic and normative aspects)	
Foreseen CFU	1 CFU (Knowledge useful to apply for a job)
Specific formative objectives	With reference to: regulations and legislation, principles of professional deontology and scientific approach to bioethical problems.
Final test	
Foreseen CFU	30
Features of final test	The final test to obtain the *Laurea Magistrale* 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). The topic, agreed upon with a docent of the Course Coastal and Marine Biology and Ecology

	(Relatore), results from activities carried out, under the supervision of the Relatore, either at university structures or laboratories, or at public or private research Institutions, in Italy or abroad; when necessary, the Tesi can also be carried out at public or private Enterprises. For Tesi carried out in other structures than the "Università del Salento" a Correlatore must also be appointed. The graduation vote, expressed in hundred-tenths and potential laude, results from the ponderal average (weighted for the CFU) of the marks achieved at the exams, of the outcome of the final test, of the career of the student, of the achieved preparation, and scientific and professional maturity.
Specific formative objectives	Acquisition of capacities suitable for the development and the deepening of further competence about: consultation of bibliographic material, consultation of data banks and of other web information, basic cognitive instruments to continuously update own knowledge.
Typology of the adopted didactic forms	Theoretical lectures, practical laboratory lectures, seminars integrating theoretical courses, stages.
Modalities of preparation checks	Oral and/or written exams, qualifying examination by test and/or colloquium

LECTURERS AND TUTORS

Lecturers of the Course of Study

SSD	*Name and SSD of course*	*Name (DDMM 16/03/07 – Art. 1, c. 9)*	*Requisites in respect to the taught courses*	*Research activities supporting teaching activities*
BIO/02	Systematic Botany BIO/02 [Module of the integrated course: *Systematic Botany and Quantitative Plant Ecology*]	MARCHIORI SILVANO	Full professor of Systematic Botany	Studies on Studies on the flora of Apulia with particular regard to endangered and/or rare species in order to their conservation. Evaluation of the distribution and size of the regional vascular flora in reference to anthropogenic influence. Studies of human activities effects on coastal habitats that contain endemic rare species and populations of critical taxa.

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BIO/03	Quantitative Plant Ecology BIO/03 [Module of the integrated course: *Systematic Botany and Quantitative Plant Ecology*]	ZUCCARELLO VINCENZO	Associated Professor of Applied and Environmental Botany, BIO/03.	Major areas of research in the quantitative plant ecology: - phytosociology and syntaxonomy of vegetation; - statistical ecology: application of fuzzy sets and multivariate analysis in plant ecology; - biological indicators: macrophyte communities as bioindicators of water quality; - applied botany for cultural heritage.
BIO/05	Pelagos Biology (Zooplankton and Necton) BIO/05	BELMONTE GENUARIO	Full Professor of ZOOLOGY (BIO 05) at the University of the Salento At present, Professor of Zoology for Cultural Heritage (6 CFU; 3 CFU of Naturalistic Museology) at the 1st level Degree "Technologies for Cultural Heritage" (Faculty of Cultural heritage) Professor of Ethology (3 CFU) at the 2nd level Degree "Ecology" (Faculty of Sciences) Responsible for the Integrative Laboratory (3 CFU) at the 2nd level Degree "Ecology" (Faculty of Sciences) Member of the Lecturers Committee of the PhD "Fundamental Ecology" (University of the Salento) Professor in the staff of the SSD for the course requested by the present Didactic Ordering.	Author/co-author of 215 products : 115 scientific papers (50 on ISI Journals), 64 abstracts, 16 divulgation issues, 12 volumes, 8 interviews on local and national networks. Member of the COMMISSIONE FAUNA of the Italian Zoologist Union, 2000 – 2003 Member of the CONSIGLIO DIRETTIVO of the Marine Biology Station Univ. of the Salento, 1999-2010. Member of 7 Scientific Societies (2 international) referee for 12 scientific journals (7 ISI) Editor *Thalassia Salentina* published by Di.S.Te.B.A.University of the Salento Member of the CoNISMa, U.O. Lecce Responsible of the lab. Zoogeography and Fauna at the DiSTeBA and of the Lab. Zooplankton at the Marine Biol. Station of the DiSTeBA Research Fields SYSTEMATICS and BIOGEOGRAPHY of Copepoda (Crustacea), LIFE CYCLES and sting stages of zoo plankton, ECOLOGY of coastal waters zoo plankton, UNDER WATER SPELAEOBIOLOGY, MUSEOLOGY AND SCIENTIFIC DISSEMINATION, ECOTOURISM

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BIO/05	Marine biology and ecology BIO/05	BOERO FERDINANDO	Full Professor of Zoology (BIO05) at the University of Salento. Ferdinando Boero teaches Zoology to first-year students in Environmental Sciences and Marine Biology to the students of the Corso di Laurea Magistrale in Ecology of the Biological Sciences Study Course.	Research interests: Marine biodiversity and ecosystem functioning, documented by more than 200 scientific contributions. Responsible of a node of the European Network of Excellence in Marine Biodiversity and Ecosystem Functioning, chair of the Biological Resources Committee of the International Commission for the Scientific Exploration of the Mediterranean Sea, member of the Directive Council of the Società Italiana di Ecologia, member of the Scientific Council of the Stazione Zoologica di Napoli, member of the Scientific Council of the Consorzio Nazionale Interuniversitario per le Scienze del Mare, chief editor of the Italian Journal of Zoology, member or past member of the editorial boards of: Ecology Letters, Journal of Evolutionary Biology, Cahiers de Biologie Marine, Aquatic Invasions, Aquatic Biology, Thalassia Salentina. Awards: Prix Manley Bendall 2005, Medaille Albert Ier, of the Oceanographic Institute of Paris, Sea Heritage Best Communication Campaign (First absolute prize).
BIO/05	Development and evolution BIO/05 [Module of the integrated course: *Life cycles and development*]	PIRAINO STEFANO	Associate professor (BIO/05) Lecturer of Animal General Biology for the basic academic degree in Biotechnology Lecturer of Experimental Developmental Biology of Marine Invertebrates (Corso di Laurea Magistrale Programme in Biology) Board Member – Phd Programme in Fundamental Ecology	Main research interests on marine biodiversity issues documented by >50 publications on ISI journals (Life cycle, ecology, systematics, phylogeny and developmental biology of marine invertebrates, metazoan evolution). President of the World Hydrozoan Society. Member of CoNISMa, the Consorzio Nazionale Interuniversitario per le Scienze del Mare U.O. Lecce Referee for 15 ISI journals

BIO/05	Life cycles and ecology BIO/05 [Module of the integrated course: *Life cycles and development*]	GIANGRANDE ADRIANA	Associate professor (BIO/05) Lecturer of Zoology for the basic academic degree in Biology Lecturer of Biology and Community Ecology (Corso di Laurea Magistrale Programme in Biology) Board Member – Phd Programme in Fundamental Ecology	Main research interests: Marine biodiversity. Reproduction and regenerations of some marine invertebrates. Population and community ecology, colonization and supply side ecology involving dispersal of marine propagules. This activity is documented by more than 100 scientific contributions. Member of the editorial boards of: Marine Ecology an evolutionary perspective. Member of the CoNISMa, the Consorzio Nazionale Interuniversitario per le Scienze del Mare U.O. Lecce Member of the International Polychaete Association
BIO/07	Biology and ecology of transitional waters BIO/07	BASSET ALBERTO	Full Professor of Ecology (BIO07) at the University of Salento. Alberto Basset has currently the responsibility of the courses of Ecology, for the first Degree in Biology, Ecology of coastal environments, for the first Degree in Biology and in Environmental Sciences, Community Biology and Ecology, for the second level Degree in Ecology. He is the coordinator of the second level Degree in Ecology and the coordinator of the PhD Programme in Fundamental Ecology. Alberto Basset is also teaching the course of Ecology in different Humanistic Faculties He is full Professor for the scientific sector of disciplines	Alberto Basset research interests are in the field of population and community ecology, ecology of lagoons, wetlands and river mouth ecosystems. He is author of scientific publications on op journals in the field of ecology, of entries in Encyclopaedias of Ecology and of book chapters. He is actually President of Italian Network of Lagoon Research and member of the Steering Committees of the European Research Network as well as of the Estuarine and Coastal Science Association (ECSA). He is in the Steering Committee of the Ecological Society of Ecology (SitE), he is the Italian representative in the Council of the Ecological European Federation and participates to the Scientific Committees of many international institutions. He is Editor in Chiel of Transitional Water Bulletin and Monographs and in the Board of Aquatic Conservation and Rendiconti del'Accademia dei Lincei. In the last five years, he served as reviewer for almost 30 different journals

			(SSD BIO07) including the topic of Biology and Ecology of Transitional Waters that is the discipline included in the present didactic regulation.	in his fields of interest.
BIO/07	Community Ecology BIO/07	MANCINELLI GIORGIO	Senior Researcher – BIO/07 – University of Salento Teaching activity (University of Salento): 2009 to present: Lecturer in Applied and Quantitative Ecology – Ist level University Degree in Biotechnology; 2005 to present: Lecturer in Ecology – Ist level University Degree in Biotechnology; 2005 to present: Lecturer in Energetic Ecology and Ecophysiology – IInd level University Degree in Biological Sciences; 2005 to present: thematic courses and seminars for the Doctorate Course in Fundamental Ecology of the University of Salento. 2005 to present: member of the Lecturer's Board of the Doctorate Course in Fundamental Ecology.	Research on community and functional ecology aims at recognizing pivotal mechanisms regulating the build up and persistence of animal communities, ultimately reflecting on ecosystem-level functioning. Study of body size-related constraints on underlying processes affecting community assembly and diversity, and on their potential interaction with climate and other temperature-related factors via metabolic-dependent processes. Due to their structural and dynamical features, detrital food webs and leaf detritus decomposition in aquatic benthic systems are favoured subjects for investigating relationships between structure and function. I am involved in national and international research projects on the ecology, conservation and management of coastal and transitional waters. Authored book chapters on international issues and scientific papers published in Oecologia, Marine and Freshwater Research, Estuarine Coastal and Shelf Science, International Review of Hydrobiology, Marine Biology.
BIO/07	Biological indicators and biomonitoring BIO/07	PINNA MAURIZIO	Senior Researcher of Ecology (BIO/07) at the University of Salento. Teaching: 2009/2010 – University of Salento: Lecturer in	Research interests: population and community ecology, decomposition processes, role of natural and anthropogenic perturbations on functional and structural features of aquatic ecosystems. Research focused on the role of individual body size in the community organization, and on the relations

			Biomonitoring, Lecturer in Ecology of inland waters. 2009/2010 – University of L'Aquila: Lecturer in Biological indicators and ecotoxicology. Before 2009/2010 – University of Salento. Lecturer in Ecology – Lecturer in Biomonitoring, Lecturer in Ecology of inland waters. 2005 to present – University of Salento. Member of the Lecturer's Board of the Doctorate Course in Fundamental Ecology. 2000 to present – University of Salento. Relator of a large number of dgree thesis.	between size diversity and stressors. A relevant research activity is finalized to development biological indicators based on individual body size measurements. Involved in local, national and international research projects on the biomonitoring, conservation and management of transitional waters. Member of Italian Society of Ecology, Italian Network of Lagoon Research, Estuarine and Coastal Science Association, CONISMA, CMCC, CIRPS. Results of research activities are published as scientific papers and book chapters on relevant journals such as Fisheries Research, Hydrobiologia, Aquatic Conservation, International Review of Hydrobiology, Environmental Sciences (China), Transitional Waters Bulletin.
BIO/09	Environmental Physiology BIO/09	LIONETTO MARIA GIULIA	Researcher in Fisiology (SSD BIO/09) at the University of Salento. She actually teaches undergraduate courses in Environmental Physiology, Applied Environmental Physiology and General and Environmental Physiology at the University of Salento. Member of the teaching board of the PhD in "Fundamental Ecology"	Actually her research activity is addressed to: - the study of the effects of environmental pollutants (organic and inorganic pollutants) on animal physiology - the study of biomarkes in sentinel organisms - the study of in vitro and in vivo ecotoxicological bioassays - the application of ecotoxicological methodologies to environmental monitoring - the study of cell volume regulation Dr M.G. Lionetto collaborates to national and international research projects. Her scientific activity is documented by works published on the main JCR international journals in the filed of Environmental Physiology, Comparative Physiology, Cellular Physiology, Toxicology,

				Ecotoxicology. She is author of three international book chapters and one international patent, and she tooked invited lectures in international symposia. Dr M.G. Lionetto is referee of several international journals in the field of toxicology, ecotoxicology, environmental and comparative physiology.
CHIM/06	Organic Chemistry of Coastal and Marine Ecosystems CHIM/06	EPIFANI ERBANA	Researcher in Organic Chemistry (CHIM/06) at the Università del Salento Present courses: Organic Chemistry Applied to Biomolecules for the Corso di Laurea in Human Biology; Physical Methods in Organic Chemistry for the Corso di Laurea in Ecology. Member of the faculty of the phd course in Fundamental Ecology	-Synthesis of biologically active organic compounds -Natural transformations of organic compounds in the environment
FIS/06	Climatology of marginal seas and of the coastal zone FIS/06	LIONELLO PIERO	Associate professor (FIS/06), Coordinator of the PhD program in "Science of Climate Change" at University of Salento, Lecturer of the course "Atmosphere and Ocean Physics" for the Academic degree in Physics and of the course "Numerical Modelling and Data Analysis" for the master degree in physics, Director of the international school "school on Climate Extremes", Lecce, 21-25 January 2008. Member of the scientific committee of the ESF-MedCLIVAR Summer School,	Chairman of the -MedCLIVAR project (Mediterranean CLImate Variability) - International Scientific Steering Committee of the HyMeX project (Hydrological cycle in the Mediterranean eXperiment). Member of the -executive committee (and coordinator of the line "extreme events") of the CIRCE EU-FP6 program, -Scientific Advisory Council of ECMWF (European Center for Medium Range Weather Forecasts) -board of experts nominated by CORILA (Consortium for Research on the Venetian Lagoon) - executive board of CINFAI (Consortium for the

			Rodes, Greece, 17 ^V27 September 2008. Lecturer at the - international schools:- Latsis Foundation 1st International Summer School "Environment: Climate, Climate Change, Impacts" 8-15th July 2009, Athens, Greece - First ESF-MedCLIVAR Summer School, Rodes, Greece, 17- 27 September 2008 - Master Sc. Program in Marine Sciences (univ of Barcelona, Sept 2009)- "CLIMATE CHANGES IN THE MEDITERRANEAN AREA" Leonforte, Italy, September 2008- MODobs school, Castro Marina, Italy, June, 2007.	study of Physics of Atmosphere and Hydrosphere) and director of its research unit at the University of Salento. His activity has included the organization of international meetings within the MedCLIVAR, EGU, EMS-ECA , IUGG organizations. Editor of the -book "Mediterranean Climate Variability" (Elsevier). - special issue on Mediterranean Climate Variability and change (GLOBAL AND PLANETARY CHANGE) and on Synoptic Climatology (Theoretical and Applied Climatology).

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Reference Lecturers	
1. Alberto Basset 2. Genuario Belmonte 3. Ferdinando Boero 4. Giorgio Mancinelli 5. Maurizio Pinna 6. Stefano Piraino 7. Erbana Epifani 8. Piero Lionello	
Tutors	
Lecturers	1. Ferdinando Boero 2. Alberto Basset 3. Stefano Piraino 4. Genuario Belmonte
People provided for by the D.L. nr. 105 of 9 may 2003 (art. 1, c. 1, l. b)	1. Caggiula Elisa 2. Desiati Simone 3. De Vita Donatello 4. Francioso Fabiana 5. Rosato Chiara
People provided for by the regulations of the University of Salento	//

SCHEMA OF TEACHING ORGANIZATION ACCORDING TO D.M. 270/04
COURSE COASTAL AND MARINE BIOLOGY AND ECOLOGY (LM51, Cl. LM-6)
A.A. 2012-2013

STUDENTS
Dispositions about possible obligations (attendance, etc.)
Attendance to theoretical lectures is not compulsory, even though it is an essential condition for a fruitful insertion of the student in the didactic organization of the Course of Study. Students, furthermore, are bound to attend laboratory activities, stages, seminars and trainings for at least 2/3 of their duration.

Enclosed the table of formative activities of the didactic regulation of the study course ascribed to years of course.