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Bachelor programme in Environmental Technology and Management

Academic unit	Coimbra College of Agriculture (ESAC-IPC)
Type	Undergraduate Major Program
Level of qualification	Level 6. First Cycle (Bachelor's Degree) Program. 30 ECTS/semester during 3 years
Qualification awarded	The students who successfully complete the program are awarded the degree of Bachelor of Science (B.S.) in Bachelor Programme in Environmental technology and management
Mode of study	Full-Time
Admission requirements and recognition of prior learning	Foreign European Union citizens who wish to enrol in ESAC-IPC undergraduate degree programmes may apply: (a) Through a national contest; (b) Students already enrolled in a foreign Higher Education Institution may ask for transfer during an annual application period, with recognition of prior learning. Non EU citizens who wish to enrol in ESAC-IPC undergraduate degree programmes must apply via the annual application for International Students, using one of the following: (a) Those with a qualification giving access to Higher Education, meaning any diploma or certificate issued by a competent authority in the country in which it was awarded can apply directly to the desired bachelor degree; (b) Those or a Diploma of Portuguese secondary school or equivalent degree must apply for the specific ESAC-IPC bachelor degree exams (www.esac.pt); More information on how to apply for the Portuguese first-cycle bachelor programmes: Study in Portugal website.
Qualification requirements	The undergraduate students in this program must be successful in all the courses with a minimum achievement grade of 10, including their compulsory traineeship, and must have completed at least 180 ECTS credits.
Profile of the programme	Coimbra College of Agriculture offers both undergraduate and graduate programs on Environmental Management. The bachelor degree in Environmental Technology and Management is an interdisciplinary study programme which focuses on the design of collection and treatment processes for air, water, wastewater, and solid and hazardous waste, including study of the conceptual principles underlying biological, physical, and chemical treatment. Our main target is to prepare students for careers, in public or private companies, related with environmental issues, management and treatment of residues, pollution prevention and their sub-subjects.
Occupational profiles of graduates	Graduates will have opportunities to work in public establishments and private sectors or have the chance to establish their own private firms.
Access to graduate studies	The graduates of this program can apply to master programs to enhance their academic skills and career. The master program in Environmental Management is a continuity of the bachelor program in Environmental Technology and Management.
Examination regulations, assessment and grading	**Assessment of success** Assessment of success in a course may be carried out by a) continuous evaluation or b) exam. The students which do not achieve success during continuous evaluation are admitted to the exam if their presence is ≥75%. **Achievement grade** Grades are given in an absolute system scoring 0 to 20. Scores 0 to 9 indicate that the student was unsuccessful in a course (fail). Scores 10 to 20 indicate that the student was successful in a course (pass). **Continuous evaluation, final, resit and graduation exams** (1) All courses contemplate continuous evaluation, which may be carried out in different ways specified in the respective Course Datasheet. a) Assessment by modules: each module is given a percentage contribution to the final grade. The student passes only if the grade for each module is ≥7.5 and the final grade of the course is ≥9.5. The failed module(s) may be assessed in the final and/or resit exams or the student may choose to assess the whole subject of the course; b) When the course is not divided in modules, the student passes if the final grade of the course is ≥9.5. The contribution of each evaluation item for the final grade is specified in the Course Datasheet. The complete subject of a failed course must be assessed in the final and/or resit exams. (2) Final exams: a student may take the final exams only if 75% presence in the classes is achieved. The final exams may assess one or more course modules or the whole course. (3) Resit exams: are the final opportunity for a student to pass a course in a given academic year, and are available to all students. The resit exams may assess one or more course modules or the whole course. (4) Graduation exams: available to finalist students with, at the most, three failed courses to fulfil the bachelor program requirements.

Curriculum

1st year – 1st (Fall) Semester						
Code	**Title**	**L**	**LP**	**Lab**	**TG**	**ECTS**
8810021	Mathematical analysis	22.5	37.5		9	6
8810020	Biology I		52.5		8	6
8810023	Physics I		45		7	6
1071101	Introduction to environmental protection		52.5		8	3
8810026	English language and communication		30		4.5	3
8810022	Chemistry and biochemistry I	30		30	9	6
1st year – 2nd (Spring) Semester						
Code	**Title**	**L**	**LP**	**Lab**	**TG**	**ECTS**
8810024	Biology II		52.5		8	6
8810027	Physics II		45		7	6
1071201	Geology and climatology		52.5		8	3
8810030	Technical English and communication		30		4.5	4.5
8810029	Numerical methods and programming	22.5	37.5		9	6
8810025	Chemistry and biochemistry II	30		30	9	6
2nd year – 3rd (Fall) Semester						
Code	**Title**	**L**	**LP**	**Lab**	**TG**	**ECTS**
1072102	General ecology		52.5		8	4.5
1072103	Economy and sociology		30		4.5	3.5
8810028	Statistics		45		7	5
8810032	Hydraulics and hydrology		60		9	6
1072101	Pedology	22.5		30	8	5
8810031	GIS and remote sensing		60		9	6
2nd year – 4th (Spring) Semester						
Code	**Title**	**L**	**LP**	**Lab**	**TG**	**ECTS**
1072205	Physicochemical analyses	30		37.5	10	5.5
1072202	Aquatic and terrestrial ecology		45		7	5
1072204	Hygiene and safety at work		30		4.5	4
1072203	Environmental microbiology	22.5		30	8	5
1072201	Environmental pollution	30		30	9	5.5
1072206	Physicochemical treatments	15	30		7	5
3rd year – 5th (Fall) Semester						
Code	**Title**	**L**	**LP**	**Lab**	**TG**	**ECTS**
1073103	Environmental and quality certification		45		7	5
1073106	Gaseous effluents and treatment processes		60		9	5.5
1073101	Energy management		37.5		5.5	4
1073104	Solid wastes and treatment processes		60		9	5.5
1073102	Clean technologies and MDT		37.5		5.5	4
1073105	Biological treatments		60		9	6
3rd year – 6th (Spring) Semester						
Code	**Title**	**L**	**LP**	**Lab**	**TG**	**ECTS**
1073203	Analysis of environmental systems		56		8	5
1073202	Environmental impact assessment		56		8	5
1073204	Environmental education		24		4	2
1073201	Regional and urban planning		28		5	3
1073205	Traineeship		350		20	15

NOTES:
L=Lecture; LP=Lecture-Practical; Lab=Laboratory; TG=Tutorial guidance. A semester has typically a duration of 15 class weeks