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UNIVERSITY OF PIRAEUS
SCHOOL OF MARITIME AND INDUSTRIAL STUDIES

DEPARTMENT OF INDUSTRIAL MANAGEMENT AND
TECHNOLOGY

MSc in INDUSTRIAL MANAGEMENT AND TECHNOLOGY

TEACHING AND ASSESSMENT METHODS FOR STUDENTS

PIRAEUS 2023-2024

CONTENTS

1. Postgraduate Program

The Postgraduate Programme in Industrial Management and Technology is structured in a flexible and mixed system of teaching approaches that adapts to the academic requirements, its interdisciplinary nature and the specific characteristics of its students. The design of the courses and teaching activities, as presented in the outline of each course and documented by the material posted on the eclass platform, takes into account and integrates:

- Innovative teaching methods based on the active participation of students in the learning process, interactive communication and critical reflection.
- Collaborative learning through hands-on learning.
- Learning through the field practice (simulations, internship program), the implementation of studies/projects and the writing of reports/scientific texts.
- Personalized Learning, through the self-study and self-assessment material posted on the eclass platform, so that each student can adapt learning to his/her own pace and interests.
- Cultivation of critical thinking through the involvement of students in experiential exercises, the encouragement of reflection and the formulation of ideas and arguments.
- Taking initiatives and enhancing students' creativity and cognitive development through research projects.
- Development of metacognitive skills through the voluntary and active involvement of students in the learning process and self-assessment activities.
- Participation of students in the evaluation procedures of the program.

2. Teaching Methods

The teaching of each course is based on theoretical lectures and/or practical training exercises, incorporating in the educational orientation a combination of modern approaches to education that focus on students and their active participation. Teaching methods include:

Learning approach	Teaching methods
Inquiry-based learning	• Presentations of assignments and/or small-scale projects, in which collaborative learning, initiative taking, digital skills and abilities of students are encouraged. • Study of articles in reputable scientific journals and exploration/use of scientific databases in order to understand the usefulness and interconnection of research methodologies with the challenges and problems of modern businesses and organisations.
Interactive activities	• Discussions, simulated consultation and interdisciplinary projects and experiential exercises that foster interest, creative expression, collaboration and self-esteem. • Brainstorming, where cognitive and metacognitive development, reflection, participation and innovation are enhanced.
Project-based learning	• Case studies, in which teamwork, critical thinking, analytical and communication skills, assimilation of knowledge and the ability to solve problems are reinforced. • Practical exercises, in which teamwork and organisational skills are enhanced, critical thinking is cultivated and skills useful for the labour market are developed. • Educational visits and group or individual projects, where critical thinking, teamwork, scientific knowledge, cooperation and social skills are enhanced.

	• Internship programme, to link scientific knowledge and education with the labour market.
Distance, synchronous and asynchronous, teaching	• All courses are hosted on the eclass platform, providing many learning support features (exercises, assignments, consolidation material, lectures, useful links, etc.). • Conducting courses on the MS Teams e-learning platform, using the tools available on the platform.
Personalized learning	• The teaching methods are flexible in order for all participants to assimilate the material at the same pace. • The tools available in eclass are used appropriately and to the maximum extent according to the needs of the students.

3. Teaching Facilities & Digital Teaching Tools

Teaching facilities include modern digital media, standard classroom equipment, specialized software programs, laboratories and laboratory equipment.

The use of IT tools in the context of the learning process has brought about a significant qualitative upgrade in the field of education with enormous potential and prospects. Digital media have now been integrated into the learning process of the Department and serve:

- Familiarity with the use of specialised software systems (design, statistical data analysis, simulation, mapping, decision making, etc.) and programs (ERP systems).
- Teaching using multimedia applications.
- The use of an integrated e-course management system on an asynchronous e-learning platform.
- The use of web-based videoconferencing applications for distance learning.
- The search for scientific knowledge and up-to-date information in the context of writing papers, reports and theses.
- Communication with teachers.
- The evaluation of courses by students.
- The modernisation and flexibility of the postgraduate program.
- Feedback from the evaluation processes.

In any case, the teaching staff makes sure to encourage the involvement of students in the learning process in order to achieve the assimilation of knowledge.

4. European Credit Transfer System

The European Credit Transfer System (ECTS) is a tool of the European Higher Education Area to make studies more transparent and thus improve the quality of higher education.

Its aim is to strengthen and facilitate academic recognition processes between partner institutions in Europe, with different national education systems, using simple and practicable mechanisms.

Credit Units (ECTS) of the Study Program

The number of credits of each course of the MSc indicates the workload that the student must undertake in order to achieve the objectives of an educational component, depending on the learning outcomes and the knowledge, competences and skills that are intended to be acquired after its successful completion. The workload includes all planned learning activities, such as lectures, workshops, seminars, practical/field exercises, study, preparation of assignments, examinations, etc.

Workload

The workload consists of the estimated time that the student typically needs to devote to complete all the learning activities (lectures, seminars, assignments, practical training, independent study, examinations) required to achieve the expected learning outcomes. The workload of a course, which includes a typical learning process and the associated learning outcomes, corresponds to 6 ECTS credit hours or 150 hours of work.

Allocation of Credit Units

The Master's degree in Industrial Management and Technology requires the accumulation of 90 ECTS credits. The number of credits allocated to each component is based on its weighting in terms of the workload required for students to achieve the learning outcomes in a formal education context.

Transfer of Credit Units

The Department's MSc complies with the European Credit Transfer System (ECTS) and applies a full transfer and recognition procedure for the academic credits of courses and internships, in which the outgoing students are successfully examined at the Host Institutions in Greece or abroad through mobility programs.

The credits awarded in one specialisation of the Department's MSc can be transferred to another specialisation of the Department's MSc.

5. Learning Outcomes

Learning outcomes are the statements encompassing everything that the learner should know, be able to understand, and be capable of applying/planning/performing after the completion of the learning process. The learning outcomes of each course include:

- The knowledge, theoretical and/or practical, acquired.
- Skills related to the understanding and use of acquired knowledge.
- The competences related to documented competence in the use of the knowledge and skills acquired.

In the context of the student-centred approach to teaching, learning outcomes are at the heart of the learning process. Their achievement, properly measured and assessed, determines the performance of students in each educational component.

At the beginning of the course, students are informed about the expected learning outcomes, the assessment system and the assessment criteria of each course by the lecturers. Further details on the procedure and type of examinations are included in the outline of each course which is posted on the Master's website and in the Study Guide.

6. Evaluation System

Assessment methods and procedures are designed based on the expected learning outcomes of each course. The assessment of students' performance functions both as a dynamic tool for learning (assessment for learning), actively involving students in the evaluation of their efforts, and as a feedback and improvement mechanism for students (continuous monitoring of their learning progress) and lecturers (e.g. redefinition of teaching objectives, redesign of appropriate teaching interventions to improve the teaching process, etc.).

More specifically, based on the course outlines and the material posted on the eclass platform, three main types of assessment are used in the framework of the program:

- Diagnostic Assessment: Due to the interdisciplinary background of the participating students and the cognitive subject of the curriculum, each leacturer, at the beginning of the semester, assesses/determines/evaluates the level of knowledge, perceptions, skills, and capabilities of their students. In addition, before the start of the educational process (i.e., before the start of the first semester), students participate in skill development seminars. In the early stages of the third semester,

when students begin working on their thesis, seminars on research methodology and writing skills are organized.

- Formative Assessment: Conducted during the course, it plays a crucial role as a feedback mechanism for both students (continuous monitoring of their learning progress, identification of weaknesses and deficiencies through the development of strong metacognitive skills such as self-regulation and self-assessment) and lecturers, who, if necessary, redesign teaching methods to maximize expected learning outcomes. Assessment takes place during the course (e.g., experiential exercises, quizzes, simulations of consultation or projects, etc.) and outside the course (e.g., self-assessment exercises, short assignments, case studies, digital tasks using simulation software, mapping, statistical data analysis, design, etc., on the eclass platform or small projects/laboratory exercises). It is worth noting that, to enhance the learning process, lecturers employ various techniques, such as peer assessment (i.e., evaluation of a student's work by fellow students).
- Evaluation of Acquired Knowledge and Skills: It is conducted at specific intervals within the semester (progress tests) or during examinations in both examination periods for each semester course, including the resit examination in September, which covers the two previous semesters. The assessment includes the following: (a) written examination with short-answer questions, (b) written examination with extended-answer questions, (c) written examination using digital technologies and software for modern and asynchronous communication, (multiple-choice questions), (d) oral examination with short-answer questions, problem-solving, case study, and critical thinking questions, (e) evaluation of a written assignment/report/project (bibliographical topics, independent case studies, problem-solving in hypothetical scenarios, research topics) with a public presentation, and (f) assessment of participation in the learning process within theoretical, seminar, or laboratory courses.

The results of individual assessments are cumulatively used in forming the final grade of the student, and/or formatively to draw conclusions about the learning process, achievement of learning objectives, and improvement of teaching. Additionally, these results serve as a feedback mechanism for the appropriateness and effectiveness of the instructional work, as well as the degree of achieving the learning outcomes. In the majority of courses, a combination of two or more of the above methods is applied. The assessment of students with special learning needs, as certified and characterized by the competent authority, is carried out according to the procedure decided by the Department's Assembly, with special care taken to facilitate and adapt the examination process according to the current legislative framework and the support of the Professor Advisor for the respective academic year and specialization of the MSc, such as providing additional examination time, oral examination, additional accommodations, etc.

A student who does not attend the final examination of a course or the resit examination in September is considered to have failed the course and is required to attend the final examination in the next academic year. It is noted that, to ensure the integrity and reliability of the evaluation process, the current regulations of the Department of Industrial Management and Technology and the University of Piraeus are applied.

Each course included in the curriculum is graded independently, excluding the Internship program. The grades given range from zero (0) to ten (10), With approximations to one decimal place. Passing grades are ≥5.

The feedback on the satisfaction level of students regarding the criteria and assessment methods is gathered through the evaluation questionnaires of the department's students.

7. Promoting Mutual Respect and Educational Success through Open Communication and Transparency

Mutual respect between students and educators is achieved through a comprehensive approach based on communication, transparency, and the creation of an environment that enhances the education and development of students. This approach includes the following:

Open communication	Maintaining open communication between students and teaching staff promotes mutual respect as it allows for the free exchange of ideas, thoughts, and opinions.

Transparency	The lecturers provide clear guidance and information to ensure transparency regarding expectations, assessment criteria, and learning processes, thereby enhancing mutual respect. Specifically: • The criteria and method of assessment for students are published in the course outline, posted on the eclass platform, and announced by the instructors at the beginning of each course. • Student assessment reflects the degree of achievement of expected learning outcomes. • Students are provided with information accompanied by advice regarding the learning process.
Encouragement of participation	Lecturers encourage students to participate in discussions and express their opinions within the framework of educational activities.
Justice and equality	The application of justice and equality in assessment, the treatment of students, and the handling of complaints enhance mutual respect. Specifically: • The Department implements an official process for handling student complaints/objections. • The evaluation of students is conducted by more than one examiners, where possible. • Student evaluation is consistent, applied fairly to all, and conducted according to established procedures. • The Academic Advisor service operates fully and successfully.
Enhancement of autonomy	Strengthening the autonomy of students to develop their own opinions and take responsibility for their education enhances respect. Specifically, the following are implemented at the Department: • Encouraging the participation of students in the assessment processes. • Providing materials and resources on eclass (bibliography, additional materials, electronic sources, etc.) for self-directed learning. • Encouraging collaboration among students through group activities.
Code of Ethics	At the Department and the University of Piraeus, a Code of Ethics and Good Practice is in effect (posted on the department's and university's websites). This code establishes the expected behaviors and principles to be followed within the educational environment.