

SPECIAL REGULATIONS FOR THE DISTANCE LEARNING OF THE EDUCATIONAL PROCESS OF THE POSTGRADUATE PROGRAMME 'IMMUNOBIOLOGY' OF THE DEPARTMENT OF BIOLOGY OF THE FACULTY OF SCIENCES AND TECHNOLOGY OF THE UNIVERSITY OF CRETE

The Postgraduate Programme (MSc) "Immunobiology" organizes its educational process by **partially** following distance learning methods. In particular, the MSc adopts a mixed system of education with modern distance education methods for the first (30 ECTS) and part of the second (15 ECTS) semester of study, up to 50% of the total teaching time, if this is deemed necessary by the lecturer and there is sufficient justification, by decision of the Programme Coordinating Committee. For the first semester of study (30 ECTS), students are given the opportunity for synchronous distance learning.

1. Synchronous, asynchronous, blended learning

The educational methodology that will be used in the MSc "Immunobiology" is that of blended learning, which combines face-to-face teaching (i.e. conventional classroom teaching) with teaching mediated via computer and internet. In other words, it combines the conventional classroom-based learning process (face-to-face learning) with the use of distance learning methods (synchronous or asynchronous).

The meetings of the MSc "Immunobiology" are held with physical presence in Heraklion, Crete or, if required, for the first and part of the second semester of studies at a distance, in a percentage not exceeding fifty percent (50%) of the teaching time of the courses of the above semesters. For the first semester of study, students shall be given the opportunity for synchronous distance learning.

Interaction via distance learning tools such as e-class, Microsoft Teams, Webex, ZOOM, etc., are communication tools for students and teachers in order to achieve optimal learning outcomes. It is important that students are able to recognize these possibilities as opportunities for interaction with teaching staff.

Distance learning supports the use of modern educational methodology and in combination with face-to-face training contributes to effective lifelong learning.

The distance teaching of part of the lectures offered in the framework of the MSc courses is due to the following reasons:

- The use of a course management system (CMS), such as the e-class used by the University of Crete, allows the placement of part of the teaching material on the electronic platform, which is thus available to all students in advance of the face-to-face meeting for study. In this way, time is saved for question solving, discussion and reflection during the face-to-face course, increasing the students' learning abilities.
- Teaching part of the curriculum remotely enables many students to express themselves in a way that they could not in the classroom, as in an online environment the uncertainty and fear of exposure to audiences in the classroom environment is reduced, thus increasing the chances of their engagement with a topic.
- The use of distance learning makes it easier for the group of students, who in some cases find it difficult to move, reducing the likelihood of poor attendance.
- These days the familiarity of most of the participants in the MSc courses with new technologies facilitates the monitoring of the educational material and increases the speed of transmission of scientific information. Nowadays, the combination of classroom teaching

and distance learning is particularly effective, as participants can make full use of it.

- In order to ensure the uninterrupted teaching of the courses of the programme on the set dates, distance teaching is chosen to ensure that there are no changes in the teaching schedule of the theoretical courses.

The above reasons are also in favor of the use of distance learning. This increases the chances of achieving better learning outcomes, taking into account the characteristics of the participants in the graduate program.

2. Documentation on the possibility and suitability of the subject matter of the MSc to be organized using distance learning methods

Potential for distance learning in the MSc "Immunobiology":

Distance learning has become increasingly popular in recent years and many universities now offer postgraduate programmes via online platforms. This is mainly because distance learning is suited to the theoretical nature of much of the courses, while the interaction necessary in the educational process is supported and enhanced through modern technologies via the creation of new engaging and interactive e-learning methods and tools, including videos, simulations and assessments, which can be accessed from anywhere with an internet connection.

Suitability of distance learning for the MSc "Immunobiology":

- a. Flexibility: Distance learning is suitable for the MSc "Immunobiology" because it offers flexibility in terms of scheduling and location. Working students can learn at their own pace and on their own schedule, which is particularly important for those with work or family commitments.
- b. Economy: Distance education is often more financially affordable than traditional classroom learning because it reduces the need for physical classrooms, academic textbooks and other materials. It also reduces travel costs for both students and tutors.
- c. Personalization: Distance learning allows for greater personalization of learning experiences. Tutors can adapt the content and delivery of their courses to meet the specific needs and interests of their students.
- f. Scalability: Distance education is scalable, which means that it can accommodate large numbers of students without the need for additional physical resources.
- e. Learning Outcomes: Research has shown that online learning can be as effective as traditional classroom learning in terms of learning outcomes, provided that the courses are well designed and students are motivated.

In conclusion, distance learning is a viable and appropriate method **for the ancillary support of a graduate studies program**. It offers flexibility, cost-effectiveness, personalization, scalability and comparable learning outcomes to traditional classroom learning.

At this point it should be emphasized that the potential and suitability of the graduate Immunobiology program to be supported with the use of distance education methods depends on several factors. Some of these factors are the following:

School: The faculty are qualified and experienced in their respective fields. They are also able to provide quality teaching and support to students.

Technology: The distance learning platform are easy to use and provide a seamless learning experience. It is equipped with the necessary tools and resources to facilitate learning.

Student Support: Students will have access to academic and technical support throughout the programme. This includes online tutoring, career services and access to resources such as libraries and databases.

Time commitment: Students should be prepared to commit the time required to complete the programme. Distance learning requires self-discipline and time management skills.

3. Analysis of the proposed methods for organizing the educational process

The educational methodology used in the MSc "Immunobiology" is face-to-face with the possibility of distance learning. That is, it has the potential to combine the conventional educational process of classroom teaching with the use of distance learning methods.

For the distance learning process, we rely on the tools offered by the eClass platform of the University of Crete, the ZOOM and Microsoft Teams platforms and various online tools (i.e. Google Classroom).

The eClass platform is an integrated e-Course Management System and is the choice of the Academic Internet (GUnet) for the support of Asynchronous Distance Learning Services. It has been designed with an orientation to enhance the educational process and supports the electronic organization, storage and presentation of educational material, independent of the limiting factors of space and time of traditional teaching, creating the conditions of a dynamic educational environment. The eClass platform is designed to implement new educational activities.

Through the eClass platform we manage educational content within each course. We use platform tools such as:

- Documents: Organizing, storing and presenting learning content. In particular, this subsystem provides an easy-to-use mechanism for managing, organizing and grouping educational material (texts, presentations, images, diagrams, etc.) through a system of folders and subfolders.
- Multimedia: storage and distribution of audiovisual material.
- Wall: Read multi-content posts (videos, documents, multimedia).
- Links: Adding and organizing useful resources from the Internet. This category also includes links to remote meetings via Webex or Microsoft Teams.

At the same time, through the eClass platform, information, communication and collaboration of all stakeholders in the MSc takes place. We use tools of the platform such as:

- Announcements: Posting of course announcements.
- Calendar: Chronological presentation of the events-stages of the course.
- Messages: Exchange of messages between tutors and students.
- Notifications: Notification of anything new regarding the course.
- Discussions: Asynchronous exchange of views and ideas.
- Teams: Group users to have a common discussion area and file upload area.
- Chat: Communication by text message between trainers and trainees in real time.

Evaluation and feedback tools have been integrated into the eClass platform. In the MSc we use

the following tools:

- Exercises: Production of closed-end exercises (multiple choice, matching, fill-in-the-blank).
- Tasks: Managing, submitting and grading assignments.
- Scorecard: Recording of trainee scores.
- Progress: helps students to improve their performance and achieve their goals
- Statistics: User statistics.

It is reminded that up to 50% of the teaching can be carried out using asynchronous distance learning methods in the first (30 ECTS) and part of the second (15 ECTS) semester of studies, which do not exceed twenty-five percent (25%) of the credit units of the MSc, while students are given the opportunity to attend the courses of the first semester of studies at a distance.

The University of Crete maintains an online platform accessible to persons with disabilities, through which asynchronous distance learning services are provided. At the electronic platform a tutor will post educational material for each course, which may include notes, presentations, exercises, indicative solutions and video lectures, provided that the applicable legislation on personal data protection is respected. All educational material is provided exclusively for the educational use of the students and is protected for any intellectual property rights in accordance with the provisions of Law No. 2121/1993 (A' 25).

4. Digital educational material

Apart from the suggested printed bibliography, there is digital material posted on the eClass platform of each course. This digital material consists of

- a) a description of the course with suggested foreign language bibliography,
- b) supporting digital material (i.e. selected texts from books, articles in scientific journals, conferences, reports, newsletters, etc.),
- c) presentations/slides of the course in PowerPoint and pdf format,
- d) case studies,
- e) exercises,
- f) a study timetable.

Each unit of material includes, among other things, objectives, learning outcomes, key concepts, basic and supplementary literature, activities and self-assessment exercises, as well as useful hints for answering them.

To support students in their study and understanding of the material, audiovisual material (video) will be provided, additional international bibliography/sites, etc.

5. IT infrastructure of the UoC to support distance learning curricula

The University of Crete (UoC) provides the following services/technologies to support distance education:

- Asynchronous distance learning systems

The e-learning system of the University of Crete can be found at <https://elearn.uoc.gr>. It is based on the popular open-source software moodle (moodle.org). All members of the academic community of the University of Crete have access to the system. The system supports: courses in the University's curricula, the platform of open academic courses and the platform of the Centre for Continuous Education and Lifelong Learning of the University.

- Modern distance learning:

- Central interdepartmental teleconference room of Voutes Campus.
- Centralised e-learning, teleconferencing and teleworking services.
The central services are supported for the realization of modern tele-education, teleconferencing and teleworking for all the departments and the administration of the University.
- Central live webcast service (live webcast).
- Blended or hybrid learning:
It is a combination of distance learning and face-to-face teaching. Blended learning is a teaching and learning process that integrates a variety of factors, such as the learning environment (school/university, learning and work), the emotional domain (motivation, internet, home, work, etc.), the process of competence development (lifelong satisfaction, discouragement, frustration) and the stakeholders involved in the teaching and learning process (students, teachers, parents, technical and administrative staff). Blended learning combines activities carried out in traditional educational settings (classroom/laboratory) with educational activities offered at a distance (synchronous or asynchronous) using new technologies and the Internet. A characteristic feature of blended learning is that it utilizes both synchronous and asynchronous forms of education, as well as combining self-directed with collaborative learning, theory with practice, videoconferencing with asynchronous learning platforms, etc.
- Content Production Centres (Studio, content editing)
The Content Production Centres (CPCs) operate at the Voutes Campus in Heraklion and the Gallos Campus in Rethymno and are used for the production of high quality audiovisual material.
- Video available on request
Videos created either in the CPC, during events, seminars, etc., or in other ways and related to the activities of the University, can be made available through the video.ict.uoc.gr platform. Live broadcasts are also supported through this platform.

Responsible for supporting distance learning in the UoC are:

- α. The Education Technologies Division of the Information and Communication Technology Services Infrastructure Center (ICT Service Center) which provides a comprehensive package of e-learning and multimedia production support services (<https://ict.uoc.gr/index.php/el/ypostiriksi/egxeiridia>).
- β. The Teaching and Learning Support Centre of the University of Crete (<https://tott.uoc.gr/>) which supports the University of Crete in the development of the distance education strategy and the use of new technologies for the development of distance education methods for all three cycles of study.

6. Digital skills of teaching staff

Emerging trends and rapid developments in the IT sector, as well as the acceleration of the digital transition on a global scale, have brought about fundamental changes in all aspects of economic and social life and activity. In this context, digital literacy is an essential prerequisite for learning, working and active participation in the digital society of the future, but also for a sustainable, competitive and inclusive economy.

The European Digital Competences Framework for Citizens (DigComp)¹ , lists five key competence areas that should be fostered through educational programmes to ensure that the necessary skills are developed:

1. Use of information and data,
2. Communication and cooperation,
3. Digital content creation,
4. Security,
5. Problem solving.

The teaching staff of the MSc is a well-trained teaching staff who had digital skills even before the pandemic. A significant percentage of our faculty have participated and are participating in distance learning programs, both undergraduate and graduate. In particular, the faculty of the MSc has the necessary digital skills to organize the educational process with the offered system. Indicatively, the teaching staff of the MSc participate in teleconferences using relevant platforms (e.g. Webex, Microsoft Teams, Zoom, etc.).

¹ <https://publications.jrc.ec.europa.eu/repository/handle/JRC106281>