



▪DEGREE PROGRAM IN BIOTECHNOLOGY
A.Y. 2026–2027
▪1st Year



▪INTEGRATED COURSE
Cell Biology and Laboratory of Methodologies for the Study of Cells and Tissues
(15 ECTS)

▪Module – Cytology and Histology (4 ECTS)
Prof. Annunziata Mauro

▪Module – Cell Physiology (4 ECTS)
Prof. Marta Czernik

▪Module – Lab. Morphological Analysis of Cells and Tissues (4 ECTS)
Prof. Annunziata Mauro

▪Module – Lab. Cell Culture (3 ECTS)
Prof. Marta Czernik



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▪Module – Cytology and Histology (4 ECTS)

Prof. Annunziata Mauro

▪Module – Lab. Morphological Analysis of Cells and Tissues (4 ECTS) (starting 3 November to 22 December)

Prof. Annunziata Mauro



COURSE OBJECTIVES AND AIMS

- Acquire detailed theoretical knowledge on the structure and organization of cells and tissues.
- Understand their interaction with the environment and recognize the relationships between structure and function at the cellular and molecular levels.
- Acquire the logical processes, strategies, and experimental methodologies that, in the biotechnological field, characterize the morphological investigation of the cell both as a single unit and as part of a complex tissue organization.

EXPECTED LEARNING OUTCOMES

- At the end of the course, the student will be able to:
 - Have acquired basic theoretical knowledge and be able to apply morphological investigation techniques in compliance with national and EU regulations, as well as ethical and bioethical principles.
 - Be able to use methods and tools to communicate and correctly manage technical-scientific information, apply experimental protocols, and work in a team.
 - Have achieved a level of professional, decision-making, and operational autonomy such as to ensure, at the end of the training program, full mastery of all necessary skills and their immediate applicability in the workplace.





-LECTURES in the classroom

**PRACTICAL LESSONS at the Microscopy Teaching
Laboratories (November 3–December 22, 2026)**

The practical lessons are carried out under the guidance of the instructor, supported by technical and scientific staff, in teaching laboratories equipped to host students in individual workstations. This allows students to develop a direct and independent approach.



Attendance is STRONGLY RECOMMENDED.

Enrollment in the Course is encouraged, on a voluntary basis and in compliance with privacy regulations, by providing postal and e-mail addresses on the E-learning Platform.

Attendance in the Teaching Laboratory is permitted only after completion of the enrollment process and successful completion of the Safety Course.

ASSESSMENT METHOD



- **REAL-TIME ASSESSMENT** of the level of learning.

- **INTERMEDIATE ASSESSMENTS** (generally one week before the official exam)

Self-assessment tests with multiple-choice questions through a computerized procedure, booked via the Reservation Form on the E-LEARNING PLATFORM.

FINAL ASSESSMENT Students who have successfully passed the Intermediate Assessment may access the **OFFICIAL FINAL EXAM**.

OFFICIAL BOOKING THROUGH THE ONLINE STUDENT OFFICE USING UNITE CREDENTIALS

During the Official Exam session, the student may:

register the grade obtained in the Intermediate Assessment, or take an oral exam to improve the final score (to be indicated when booking the official exam).

The oral exam will focus on theoretical knowledge, ability to apply concepts in practical contexts, methodological and instrumental skills, awareness of critical issues in different operational contexts, and the ability to communicate using appropriate scientific language.



ASSESSMENT METHOD



STUDENT FAILS THE FINAL EXAM

They may access the subsequent scheduled final assessments within the exam session period.

Otherwise, the student must repeat the computerized intermediate assessment.



EXAM PROGRAM

Course Catalogue

<https://unite.coursecatalogue.cineca.it/corsi/2026/10420/insegnamenti/2026/7577/2026/9999?schemaid=1153>

UNIVERSITA' DEGLI STUDI DI TERAMO Course Catalogue

Home / Courses / Course [95] / Teaching [A000714]

[A000714] - CELL BIOLOGY AND METHODOLOGIES FOR THE STUDY OF CELLS AND TISSUES

Year of enrollment 2026/2027

[Save PDF](#)

General information

Course: [BIOTECHNOLOGY \(ENGLISH LANGUAGE\)](#)
Course type: Bachelor or equivalent first cycle
Academic year: 2026/2027
Year: 1
Training activity type: Compulsory subjects, characteristic of the class
Scope: Discipline biotecnologiche con finalità specifiche veterinarie
Language: English
CFU: 15 CFU
Didactic Activity Type: Lezione
Exam type: Oral exam
Evaluation: Voto Finale
Teaching period: Primo Semestre (from 24/09/2026 to 18/12/2026)

Modules

This teaching is divided into the following modules. For more detailed information select a module

Cell culture laboratory	View detail
Cellular physiology	View detail
Cytology and Histology	View detail
Morphological analysis of cells and tissues laboratory	View detail

2030 Agenda Goals for Sustainable Development

Goals

Required skills

Subjects

Teaching methods

Verification of learning

Books

Module's Books

-Bruce Alberts, Rebecca Heald, Karen Hopkin. "Essential Cell Biology", 2023, Editor WW Norton & Co , EAN 9781324033394

Pawlina W, "Histology A Text and Atlas - With Correlated Cell and Molecular Biology" IX 2023, Editor Lippincott Williams, ISBN 9781975181574

- For the Lab Module: The study material will be provided by the instructor in class.**
- Basic and Advanced Laboratory Techniques in Histopathology and Cytology. Ed. Springer Singapore. Pranab Dey. Latest Edition. <https://doi.org/10.1007/978-981-19-6616-3>**
- Theory and Practice of Histological Techniques. Ed. John D. Bancroft and Marilyn Gamble. Sixth Edition.**

Contacts



Teacher	Prof. Annunziata Mauro
EMAIL	amauro@unite.it
Phone office	0861.266888
Receiving Students	Monday, 12:00–1:00 PM, by appointment via email

In Laboratory

Preparation of Cytological and Histological Specimens



Microtomes



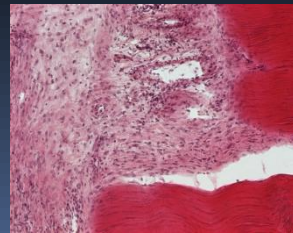
Ultramicrotomes



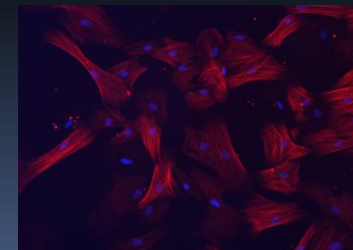
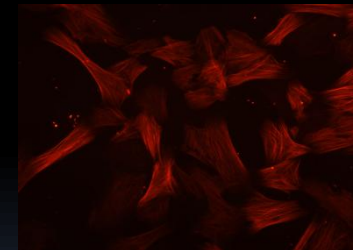
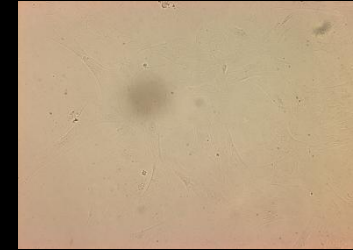
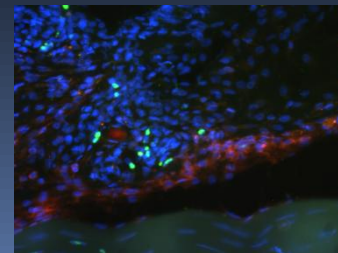
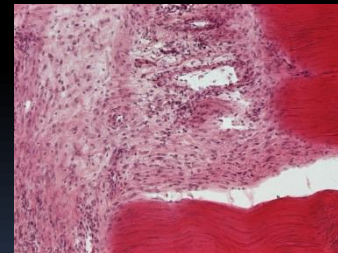
Cryostats or Freezing Microtomes

Observation of Cytological and Histological Specimens

Light Microscope

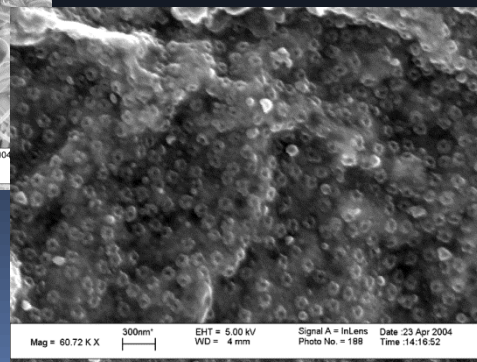
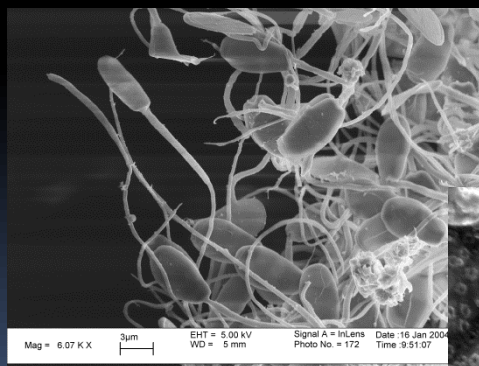


Fluorescence Light Microscope



Electron Microscopy

Scanning Electron Microscope (SEM)



Transmission Electron Microscope (TEM)



Tutors Recruited and Assigned to the BSc in Biotechnology A.Y. 2025–2026

What is the role of a tutor?

- To help students achieve **better learning conditions** (by creating a learning environment tailored to their needs and helping them overcome difficulties).
- To organize and manage **integrative and cooperative activities**, even in small groups, such as exercises, labs, review and remedial activities, as well as support tasks like project work or administering intermediate tests.
- To provide **ongoing guidance**, helping students acquire proper study methods and relational skills.
- Tutors may also work with specific cohorts of students, or with inactive students, to help them resume their academic path

In one word? Support!

A tutor is someone who offers support, of any kind, to one or more students who may need it.

Enrollment in the E-LEARNING PLATFORM course:in order to consult the teaching materials and receive all related organizational information.



 Username



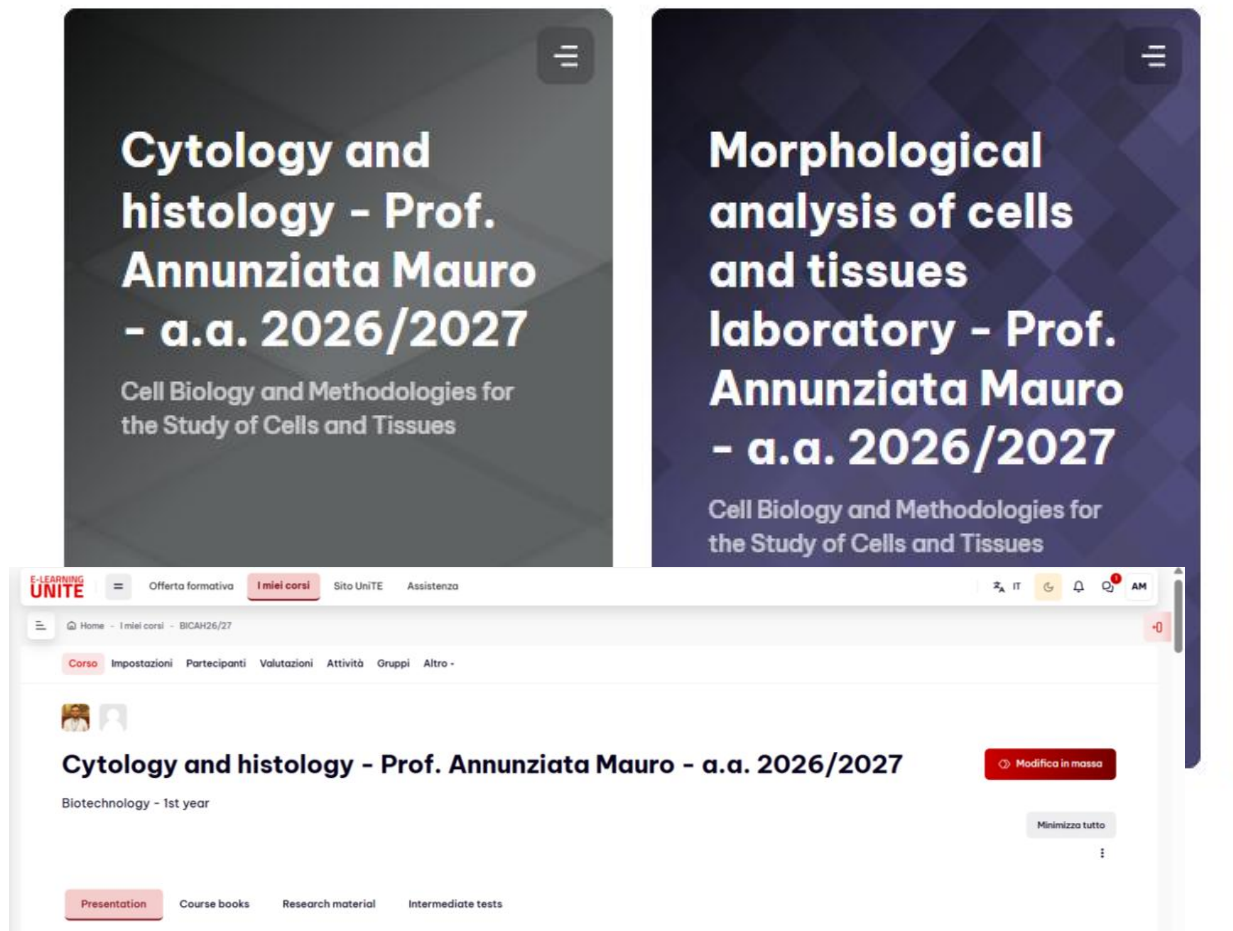
Hai dimenticato lo username o la password?

Login

Alcuni corsi possono consentire l'accesso agli ospiti

Accedi ai corsi come ospite

**Se non hai ancora ricevuto la matricola e
hai urgenza di accedere**

The image shows a user interface for course enrollment. At the top, there are two large cards for the course "Cytology and histology - Prof. Annunziata Mauro - a.a. 2026/2027". The left card is dark grey and the right card is dark blue. Both cards mention "Cell Biology and Methodologies for the Study of Cells and Tissues". Below these cards is a screenshot of the course page on the E-LEARNING UNITE platform. The screenshot shows the course title, the professor's name, and the academic year. It also displays a navigation menu with options like "Corso", "Impostazioni", "Partecipanti", "Valutazioni", "Attività", "Gruppi", and "Altro". There are buttons for "Modifica in massa" and "Minimizza tutto". The bottom of the screenshot shows a section for "Presentation", "Course books", "Research material", and "Intermediate tests".