Master's Degree Program in Genetics and Molecular Biology

SAPIENZA
UNIVERSITÀ DI ROMA

FACOLTÀ DI SCIENZE MATEMATICHE FISICHE E NATURALI

Coordinator: alessandro.rosa@uniroma1.it

Study Plans

- The selection of the curriculum and the exams to be taken is formalized through the completion of the *Study Plan* or *Percorso Formativo* (PF) and its subsequent approval by the program coordinator.

- The PF must be completed online via **Infostud** from November 15th, 2024, to January 15th, 2025. This process is reopened annually, allowing for changes to the initially chosen exams.

- For exams from other Master's programs selected as "free choice exams," a justification must be provided in the designated field.

- Among the "free choice exams," it is possible to include exams aimed at obtaining the 24 CFU required for teaching certification.

- It is not permitted to select exams from Bachelor's degree programs (L3).

CURRICULUM- ITALIANO	CFU
Regolazione dell'espressione genica negli eucarioti-BIO11	6+6
Genetica Umana- BIO18	6
Struttura, biosintesi e analisi delle proteine- BIO10	6
Biologia molecolare delle cellule staminali - BIO11	12
Genetica dello sviluppo - BIO18	
Epigenetica - BIO-18	
Genetica dell'invecchiamento - BIO18	
Controllo epigenetico espressione genica - BIO11	
Biodiversità ed evoluzione umana - BIO08	6
Oncologia molecolare – MED04	12
Patologia molecolare - MED04	
Parassitologia molecolare – VET06	12
Virologia Molecolare – BIO19	
esami a scelta libera	12

CURRICULUM- ENGLISH	CFU
Gene expression regulation in eukaryotes	6+6
Human Genetics	6
Structure, biosynthesis and analysis of proteins	6
Molecular biology of stem cells - BIO11	18
High-resolution RNA biology - concepts and tools - BIO11	
Molecular Mechanisms of Plant Development - BIO11	
Methods in human genetics -BIO18	
Methods in molecular biology -BIO11	
Genome evolution – BIO18	
Cell cycle - BIO06	6
Intracellular trafficking - BIO06	
Molecular oncology - MED04	6
Molecular and cellular physiology – BIO09	
Computational methods in biology – BIO10	12
Data analysis - FIS01	
Programming and Machine Learning for Biological Data –BIO/10	
Biochemical biotechnologies – BIO/10	
Pharmacology in drug discovery – BIO14	
Psychobiology with elements of psychopharmacology- M-PSI/02	
free choice courses	12

+

Final Examination: 39 CFU

Additional Educational Activities (Tirocinio): 3 CFU

TOT 120 CFU

Study Plans

TIPOLOGIA	ANNO	SEM.	INSEGNAMENTO	CFU	SSD
Fondamentali	I	I mod 1 II mod 2	Regolazione dell'espressione genica negli eucarioti	12	BIO/11
		II	Struttura, biosintesi e analisi delle proteine	6	BIO/10
			Genetica Umana	6	BIO/18
Opzionali del settore biodiversità e ambiente - 6 cfu (1 esame) a sceltra tra:	I / II	I	Cell cycle	6	BIO/06
		II	Biodiversità ed evoluzione umana	6	BIO/08
		II	Intracellular trafficking	6	BIO/06
Opzionali del settore biomedico - 12 cfu (2 esami) a scelta tra:	I	I	Oncologia molecolare	6	MED/04
			Patologia molecolare e immunopatologia	6	MED/04
			Molecular and cellular physiology	6	BIO/09
Opzionali del settore biomolecolare - 12 cfu (2 esami) a scelta tra:	I	I	Controllo epigenetico dell'espressione genica	6	BIO/11
			Epigenetica	6	BIO/18
			Biologia molecolare delle cellulare staminali	6	BIO/11
			Molecular methods	6	BIO/11
			Meccanismi molecolari nello sviluppo delle piante	6	BIO/11
			Methods in human genetics	6	BIO/18
		II	Genetica dello sviluppo	6	BIO/18
			Genetica dell'invecchiamento	6	BIO/18
			Genome evolution	6	BIO/18
			High-resolution RNA Biology - concepets and tools	6	BIO/11
Opzionali del settore affini e integrativi - 12 cfu (2 esami) a scelta tra:	I	I	Pharmacology in drug discovery	6	BIO/14
			Computational methods in biology	6	BIO/10
		II	Virologia molecolare	6	BIO/19
			Data analysis	6	FIS/01
			Parassitologia molecolare	6	VET/06
			Biochemical biotechnologies I	6	BIO/10 - CHIM/11
			Psychobiology with elements of psychopharmacology	6	M-PSI/02
			Programming and machine learning for biological data	6	BIO/10
A libera scelta	I / II	I / II	2 insegnamenti a scelta (12 CFU) tra gli opzionali non selezionati, dal curriculum inglese o all'interno dell'intera offerta formativa di Sapienza		

TYPOLOGY	YEAR	SEM.	EXAM	CFU	SSD
Basics	I	I mod 1 II mod 2	Gene expression regulation of eukaryotes	12	BIO/11
		II	Structure biosynthesis and analysis of proteins	6	BIO/10
			Human genetics	6	BIO/18
Optionals from the biodiversity and environment sector - 6 cfu (1 exam) to choose between:	I / II	I	Cell cycle	6	BIO/06
	I / II	II	Intracellular trafficking	6	BIO/06
Optionals from biomedical sector - 6 cfu (1 exam) to choose between:	I	I	Molecular and cellular physiology	6	BIO/09
			Molecular oncology	6	MED/04
Optionals from biomolecular sector - 18 cfu (3 exams) to choose between:	I	I	Methods in human genetics	6	BIO/18
			Molecular methods	6	BIO/11
		II	Molecular biology of stem cells	6	BIO/11
			High-resolution RNA biology - concepts and tools	6	BIO/11
			Genome evolution	6	BIO/18
Optionals from related and integrative sector - 12 cfu (2 exams) to choose between:	I	I	Pharmacology in drug discovery	6	BIO/14
			Computational methods in biology	6	BIO/10
		II	Data analysis	6	FIS/01
			Biochemical biotechnologies I	6	BIO/10 - CHIM11
			Applied biochemistry	6	BIO/10
			Microbial biotechnologies: industrial applications	6	CHIM/11
			Psychobiology with elements of psychopharmacology	6	M-PSI/02
			Programming and machine learning for biological data	6	BIO/10
Free choise	I / II	I / II	2 exams to choose (12 CFU) among the non-selected optionals, from italian curriculum or within the entire educational offer of Sapienza		

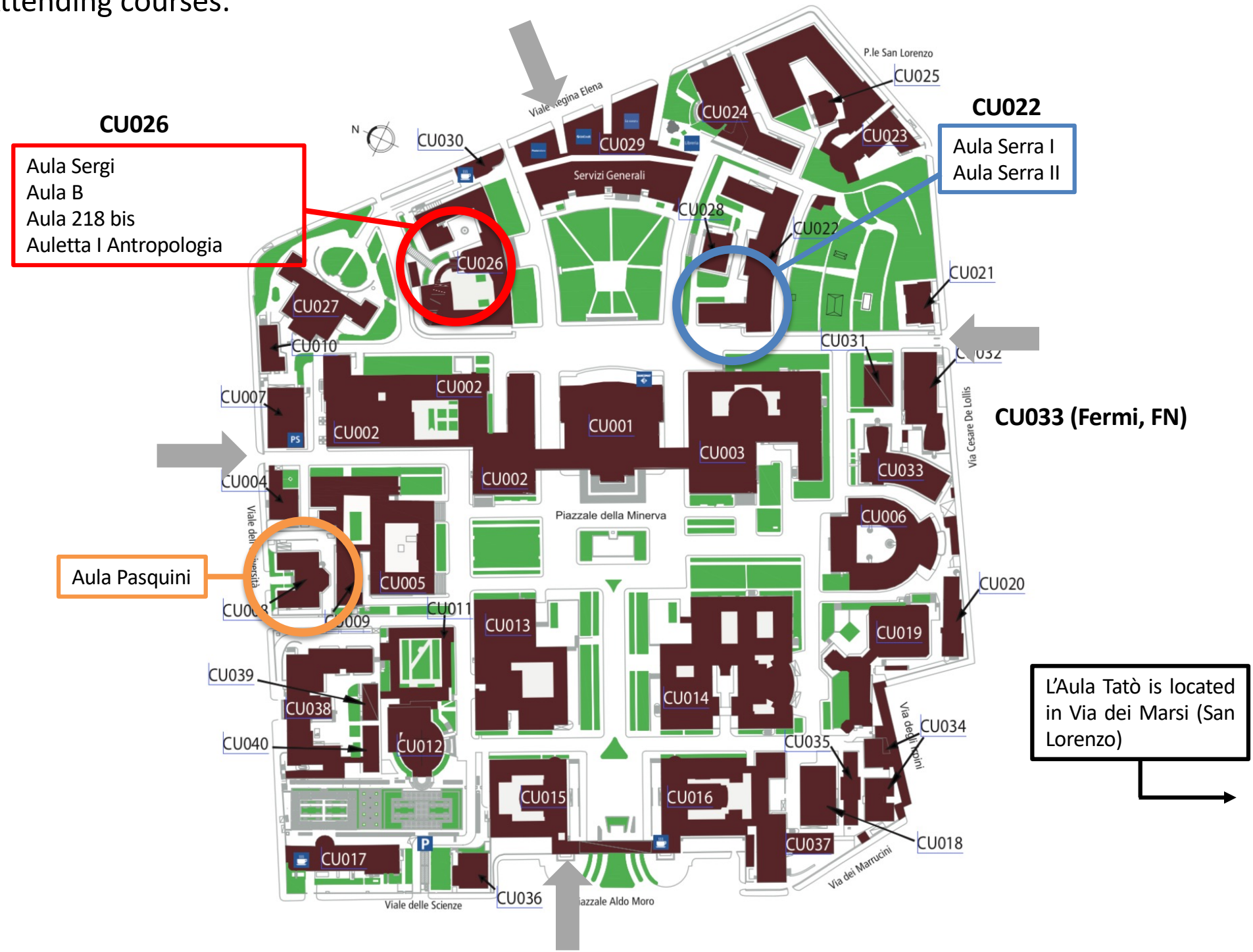
Final Examination:
39 CFU

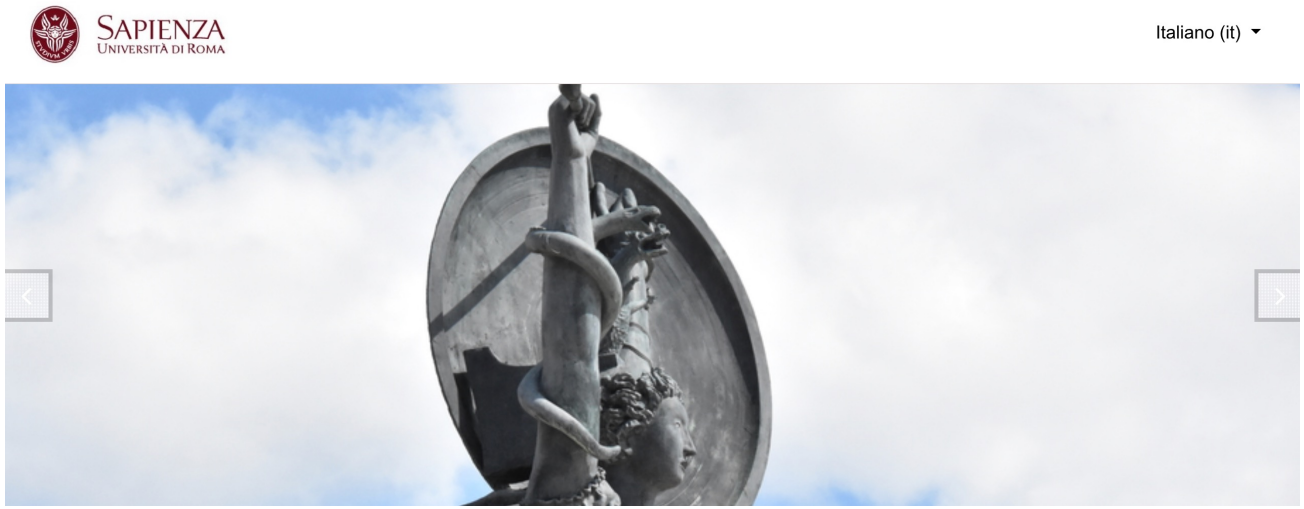
Additional Educational Activities (Tirocinio):
3 CFU

Study Plans

- The 3CFU for the «Tirocinio» are awarded after the corresponding exam is recorded in Infostud BEFORE graduation, while the 39CFU for the final examination are granted only after the thesis defense.

Attending courses:





For general information about the courses (programs, teaching materials, remote access links, etc.), please visit the individual course pages on:

https://elearning.uniroma1.it

The Degree Program Council

(Consiglio del Corso di Studio, CCdS)

- It is responsible for defining and proposing the curriculum, the academic regulations, and the management of the degree program.

- The council is composed of faculty members from the program, staff from the Academic Office, and 3 student representatives from the degree program.

Student Representatives:
NICODEMO BELLI belli.2077502@studenti.uniroma1.it

Observatory Commission for the Teaching

Commissione Osservatorio per la Didattica (COD)

2022-2024

Prof.: Cenci G., Rosa A.
Students: Student Representatives

The commission is composed equally of two faculty members and two students. The two faculty members are appointed by the Degree Program Council (CdS) in Genetics and Molecular Biology, while the students are appointed by the President of the CdS based on recommendations from the students. Faculty members serve a three-year term on the commission.

The responsibilities of the commission include:

- Managing a permanent observatory on the effectiveness of teaching activities.
- Assessing the effectiveness of decisions made by the CdS and the Faculty regarding the quality of teaching and the services provided.
- Developing proposals aimed at improving the quality and efficiency of teaching.
- Supporting the Quality Commission in drafting the annual self-assessment report.

These tasks are carried out by consulting the students who are part of the Commission during regular meetings. In these meetings, other students may be invited—either at the request of the students or on special occasions—to provide more comprehensive information on any issues being discussed.

Students with Disabilities and Specific Learning Disorders (DSA)

- Sapienza provides support services for students with disabilities and specific learning disorders (DSA).
- It is recommended to contact the appropriate personnel at the beginning of the semester.
- For more information, please reach out to the Faculty representative, Prof. Laura Varone (laura.varone@uniroma1.it).

Experimental thesis

- This thesis is conducted in a **research laboratory** related to one of the disciplines outlined in the curriculum.

- Graduating students will have the opportunity to participate in research projects taking place in laboratories at the “Sapienza” University of Rome and in recognized research institutions (CNR, IRCS, ISS, hospitals, etc.).

- Theses conducted in laboratories directed by faculty members from the Biological area (affiliated with the Department of Biology and Biotechnologies) are considered "internal," while students completing "external" theses must find an "internal" advisor from the degree program (CdS).

- The thesis can also be carried out in foreign laboratories, subject to prior approval from the Degree Program Council (CdS). No formal agreements are required, but the activity must be approved by the CdS according to a timeline available on the following page: https://bbcd.bio.uniroma1.it/bbcd/it/procedure-di-laurea. This page also provides a detailed guide on the procedures to follow.

Please register to our telegram channel