UNIVERSITÀ DI PAVIA

DIPARTIMENTO DI INGEGNERIA CIVILE E ARCHITETTURA

DEPARTMENT OF INGEGNERIA CIVILE E ARCHITETTURA

Corso di Laurea Magistrale in

Master's Degree in

CIVIL ENGINEERING FOR MITIGATION OF RISK FROM NATURAL HAZARDS

PIANO DI STUDIO PER GLI ISCRITTI AL 1° ANNO – DM 270/'04 ANNO ACCADEMICO 2025/2026

STUDY PLAN FOR STUDENTS ENROLLED IN 1° YEAR – DM 270/04 ACADEMIC YEAR 2025/2026

La/Il sottoscritta/o / *The undersigned*,

Matricola / *Matriculation number* ……

Cognome / *Surname*..... Nome / *Name*……

Nata/o a / *Born in (city)* …… Prov./ *State* …… il / *on* ……

Residente in / *Resident in (city)*…… Prov./ *State* ……

CAP / *Postal code* …… Via o Piazza / *Street name* ……

N. civico / *number* …… Tel. / *Phone* ……

Corso di Laurea Magistrale in
CIVIL ENGINEERING FOR MITIGATION OF RISK FROM NATURAL HAZARDS

Master's Degreein CIVIL ENGINEERING FOR MITIGATION OF RISK FROM NATURAL HAZARDS

prevede i seguenti percorsi: */ includes the following tracks:*

- **TRACK 01 - REDUCTION OF SEISMIC RISK (ROSE)**
- **TRACK 02 - HYDROGEOLOGICAL RISK ASSESSMENT AND MITIGATION (HYRIS)**

Gli studenti che intendono effettuare scelte diverse che si discostano dal modello di piano di studi che segue presenteranno un piano di studi individuale (per il quale è prevista una marca da bollo da euro 16,00 che verrà generata dagli uffici). Maggiori informazioni sono disponibili sulla pagina dedicata https://portale.unipv.it/it/didattica/corsi-di-laurea/studiare/piani-di-studio nella sezione Eccezioni: il piano cartaceo.

Students who wish to make choices not provided by the following form should submit an individual study plan (in this case administrative offices will generate a fee of €16 for an extra revenue stamp). More information is available at the dedicated webpage: https://portale.unipv.it/it/didattica/corsi-di-laurea/studiare/piani-di-studio in the section "Exceptions: Study plan submitted in paper form".

APPROVATO NELLA RIUNIONE DEL CONSIGLIO DIDATTICO/CONSIGLIO DI DIPARTIMENTO DEL / *Approved in the session*

of the Teaching Council/Department Council on .....

SI DICHIARA LA CONFORMITA' DEL PIANO INDIVIDUALE ALL'ORDINAMENTO DIDATTICO DEL CORSO DI STUDIO IN RELAZIONE ALLA COORTE DI APPARTENENZA DELLO STUDENTE (SCHEDA RAD). / *It is declared that the individual plan follows the course regulations depending on the student's year of enrollment (RAD form).*

FIRMA DEL REFERENTE DEL CORSO DI LAUREA MAGISTRALE/ *Signature of the Program Coordinator*

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TRACK 01 - REDUCTION OF SEISMIC RISK (ROSE)

1° Year - academic year 2025/2026 - 60 CFU

ATTIVITÀ FORMATIVA Courses	CFU cfu	Settore Scientifico Disciplinary Sector	TAF/Ambito TAF/Teaching Field	Tipo Insegnamento Course Type
508173 - DYNAMICS OF STRUCTURES	6	ICAR/08	Distinctive/Ingegneria civile	Compulsory
508174 - REINFORCED CONCRETE STRUCTURES	6	ICAR/09	Distinctive/Ingegneria civile	Compulsory
508171 - APPLIED MATHEMATICS	6	MAT/08	Related/Supplementary/Affine/Integrativa	Compulsory
508175 - COMPUTATIONAL MECHANICS	6	ICAR/08	Distinctive/Ingegneria civile	Compulsory
508176 - FOUNDATION ENGINEERING AND EARTH RETAINING STRUCTURES	6	ICAR/07	Distinctive/Ingegneria civile	Compulsory
508172 - PROBABILITY AND STATISTICS FOR ENGINEERING APPLICATIONS	6	ICAR/09	Distinctive/Ingegneria civile	Compulsory
508177 - SEISMIC HAZARD AND GEOTECHNICAL EARTHQUAKE ENGINEERING	12			Compulsory
Teaching Units of SEISMIC HAZARD AND GEOTECHNICAL EARTHQUAKE ENGINEERING				
511392 - SEISMIC HAZARD AND ENGINEERING SEISMOLOGY	*6*	*GEO/10*	*Related/Supplementary/Affine/Integrativa*	Compulsory
508179 - GEOTECHNICAL EARTHQUAKE ENGINEERING	*6*	*ICAR/07*	*Distinctive/Ingegneria civile*	Compulsory
508180 - ADVANCED STRUCTURAL ANALYSIS AND FUNDAMENTALS OF SEISMIC DESIGN	12			Compulsory
Teaching Units of ADVANCED STRUCTURAL ANALYSIS AND FUNDAMENTALS OF SEISMIC DESIGN				
508181 - NONLINEAR RESPONSE ANALYSIS	*6*	*ICAR/09*	*Distinctive/Ingegneria civile*	Compulsory
508182 - FUNDAMENTALS OF SEISMIC DESIGN	*6*	*ICAR/09*	*Distinctive/Ingegneria civile*	Compulsory

2° Year - academic year 2026/2027 - 60 CFU

ATTIVITÀ FORMATIVA Courses	CFU cfu	Settore Scientifico Disciplinary Sector	TAF/Ambito TAF/Teaching Field	Tipo Insegnamento Course Type
508185 - MASONRY STRUCTURES	6	ICAR/09	Distinctive/Ingegneria civile	Compulsory
508186 - BRIDGE STRUCTURES	6	ICAR/09	Distinctive/Ingegneria civile	Compulsory
509688 - RISK ASSESSMENT AND LOSS ESTIMATION	6	ICAR/09	Distinctive/Ingegneria civile	Compulsory
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12		Optional/	Elective
508189 - STEEL STRUCTURES	6	ICAR/09	Optional/A scelta dello studente	Elective
509689 SEISMIC ISOLATION AND DISSIPATION	6	ICAR/09	Optional/A scelta dello studente	Elective
510774 - SUSTAINABILITY SCIENCE IN THE BUILT ENVIRONMENT	3	ING-IND/11	Optional/A scelta dello studente	Elective
511390 - SYSTEMIC RISK AND INDIRECT IMPACTS	3	ICAR/02	Optional/A scelta dello studente	Elective
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	NN	Other/Altre conoscenze utili per l'inserimento nel mondo del lavoro	Elective
508207 - PROJECT WORK	3	NN	Other/Altre conoscenze utili per	Elective

			l'inserimento nel mondo del lavoro	
503327 - MASTER THESIS	27	PROFIN_S	Final Exam/Per la prova finale	Compulsory

TRACK 02 - HYDROGEOLOGICAL RISK ASSESSMENT AND MITIGATION (HYRIS)

1° Year - academic year 2025/2026 - 60 CFU

ATTIVITÀ FORMATIVA Courses	CFU cfu	Settore Scientifico Disciplinary Sector	TAF/Ambito TAF/Teaching Field	Tipo Insegnamento Course Type
508196 - CONTINUUM MECHANICS	6	ICAR/01	Distinctive/Ingegneria civile	Compulsory
508069 - FLUVIAL HYDRAULICS	6	ICAR/01	Distinctive/Ingegneria civile	Compulsory
508171 - APPLIED MATHEMATICS	6	MAT/08	Related/Supplementary/Affine/Integrativa	Compulsory
508197 - ENGINEERING GEOLOGY AND HYDROMORPHOLOGY	12			Compulsory
Teaching Units of ENGINEERING GEOLOGY AND HYDROMORPHOLOGY				
508194 - ENGINEERING GEOLOGY	*6*	*GEO/05*	*Related/Supplementary/Affine/Integrativa*	Compulsory
508198 - HYDROMORPHOLOGY	*6*	*GEO/04*	*Related/Supplementary/Affine/Integrativa*	Compulsory
508172 - PROBABILITY AND STATISTICS FOR ENGINEERING APPLICATIONS	6	ICAR/09	Distinctive/Ingegneria civile	Compulsory
508199 - LANDSLIDES HAZARD AND RISK	6	GEO/05	Related/Supplementary/Affine/Integrativa	Compulsory
508200 - GEOMATICS AND GIS	6	GEO/04	Related/Supplementary/Affine/Integrativa	Compulsory
508201 - COMPUTATIONAL FLUID DYNAMICS	6	ICAR/01	Distinctive/Ingegneria civile	Compulsory
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	6			
508081 - SNOW AVALANCHES AND RELATED MOUNTAIN NATURAL HAZARDS	6	ICAR/02	Optional/A scelta dello studente	A scelta

2° Year - academic year 2026/2027 - 60 CFU

ATTIVITÀ FORMATIVA Courses	CFU cfu	Settore Scientifico Disciplinary Sector	TAF/Ambito TAF/Teaching Field	Tipo Insegnamento Course Type
508202 - HYDROLOGICAL RISKS	6	ICAR/02	Distinctive/Ingegneria civile	Compulsory
510798 - FLOOD PROPAGATION AND FLUVIAL PROTECTION WORKS	12			Compulsory
Teaching Units of FLOOD PROPAGATION AND FLUVIAL PROTECTION WORKS				
507329 - FLOOD PROPAGATION	*6*	*ICAR/02*	*Distinctive/Ingegneria civile*	Compulsory
510802 - FLUVIAL PROTECTION WORKS	*6*	*ICAR/01*	*Distinctive/Ingegneria civile*	Compulsory
509634 - RELIABLE DESIGN AND MANAGEMENT OF URBAN HYDRAULIC INFRASTRUCTURES	6	ICAR/02	Distinctive/Ingegneria civile	Compulsory
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	6			
508176 - FOUNDATION ENGINEERING AND EARTH RETAINING STRUCTURES	6	ICAR/07	Optional/A scelta dello studente	Elective
508193 - RISK EMERGENCY MANAGEMENT AND LEGISLATION	3	IUS/02	Optional/A scelta dello studente	Elective
511390 - SYSTEMIC RISK AND INDIRECT IMPACTS	3	ICAR/02	Optional/A scelta dello	Elective

			studente	
511763 - RISK MODELLING FOR CLIMATE-RELATED FINANCIAL DISCLOSURE	3	ICAR/02	Optional/A scelta dello studente	Elective
511764 - HYDRAULIC MEASUREMENTS	3	ICAR/02	Optional/A scelta dello studente	Elective
509321 - LANDSLIDE MODELING AND MITIGATION STRATEGIES	6	ICAR/07	Optional/Altre conoscenze utili per l'inserimento nel mondo del lavoro	Elective
509536 - ITALIAN LANGUAGE FOR FOREIGN STUDENTS	3	NN	Other/Altre conoscenze utili per l'inserimento nel mondo del lavoro	Elective
508207 - PROJECT WORK	3	NN	Other/Per la prova finale	Elective
503327 - MASTER THESIS	27	PROFIN_S	Final Exam/	Compulsory

Elenco degli insegnamenti anticipabili (opzionale)

LIST OF ADVANCEABLE EXAMS (optional)

Anno Di Corso *Year*	**Codice Insegnamento** *Course Code*	**Denominazione Insegnamento** *Course Title*	**Cfu** *Cfu*	**Settore** *Sector*
second	508185	MASONRY STRUCTURES	6	ICAR/09
second	508186	BRIDGE STRUCTURES	6	ICAR/09
second	509688	RISK ASSESSMENT AND LOSS ESTIMATION	6	ICAR/09
second	508202	HYDROLOGICAL RISKS	6	ICAR/02
second	510798	FLOOD PROPAGATION AND FLUVIAL PROTECTION WORKS	12	ICAR/02 ICAR/01
second	509634	RELIABLE DESIGN AND MANAGEMENT OF URBAN HYDRAULIC INFRASTRUCTURES	6	ICAR/02

EVENTUALI ESAMI IN SOVRANNUMERO (MAX 24 CFU)

POSSIBLE EXTRA EXAMS (MAX 24 CFU)

ATTIVITÀ FORMATIVA *Courses*	**CFU** *Cfu*	**SETTORE** *Sector*	**ANNO DI CORSO** *Year*

Catalogo degli insegnamenti

Courses Catalogue

Data / *Date*..... Firma dello studente / *Student's signature* .....