



Courses List Incoming Students

2024-2025

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Semester 1 – Fall Semester 2024-25 (Sept-Dec)

ESILV 4th YEAR – FALL SEMESTER – CYBERSECURITY & CLOUD COMPUTING (CCC)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSES NAMES	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESIIN473723	Operating Systems	1	15
	MESIIN475123	Network	2	27
	MESIIN475623	Scrum methodology	1	15
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESIIN472923	Object Oriented Development	2	30
	MESIIN475223	Infrastructure Technology	2	30
	MESIIN476223	Cybersecurity Landscape	2	30
	MESIIN476323	Mobile Devices	2	30
Total			24	329

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESIIN470323	Advanced Database Management	2	27
	MESIIN472823	Software Engineering	2	27
		Dev Web Frameworks	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER - DATA & ARTIFICIAL INTELLIGENCE (DIA)

MANDATORY BLOCK:

TEACHING UNITS	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESIIN473723	Operating Systems	1	15
	MESIIN475123	Network	2	27
	MESIIN475623	Scrum methodology	1	15
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESIIN471623	Programming & data analysis	2	30
	MESIIN475823	Mathematics for Deep Learning	2	30
	MESIIN475923	Green AI (responsible, frugal)	2	30
	MESIIN476023	AI Algorithms	2	30
Total			24	329

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESIIN470323	Advanced Database Management	2	27
	MESIIN472823	Software Engineering	2	27
		Dev Web Frameworks	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – ENERGY & SUSTAINABLE CITIES (EVD)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESISI470123	Heat exchangers	2	27
	MESISI470223	Fluid Mechanics	2	27
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESISI471923	Energetic efficiency & Smart Metering	2	30
	MESISI472123	Decarbonisation and Energy Mix	1	15
	MESISI472223	Nuclear Energy	1	15
	MESISI472323	Solar Energy	2	27
	MESISI472423	Wind Energy	2	27
Total			24	326

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Dynamics of vehicles and powertrains systems	2	27
		Acoustics	2	27
	MESIIN473323	Innovation design	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – FINTECH (FIN)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES		ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESIIN473723	Operating Systems	2	27
	MESIIN475123	Network	2	27
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESIIN470423	Cryptocurrencies Market	1	15
	MESIIN470623	Blockchain Programming	3	45
	MESIIN473323	Rust Programming	2	30
	MESIIN476423	Symmetric-key algorithm	2	30
Total			24	329

TEACHING UNIT	23-24Code	Module	ECTS	TEACHING HOURS
OUVERTURE	MESIIN470323	Advanced Database Management	2	27
	MESIIN472823	Software Engineering	2	27
		Dev Web Frameworks	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – FINANCIAL ENGINEERING (IF)

MANDATORY BLOCK:

TEACHING UNIT	23-23 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIFI470123	Advanced probability	3	40,5
	MESIFI472123	Financial markets and instruments	1	13,5
	MESIIN470223	Machine Learning (page 4)	2	27
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESIFI471123	C++ for finance	2	30
	MESIFI471323	Market risk	2	31,5
	MESIFI472023	Advanced statistics	3	42
	MESIFI472323	Python, Git, Linux	1	15
Total			24	324,5

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESIFI470723	Advanced financial concepts and models	2	27
	MESIFI471023	Time series econometrics	2	27
	MESIFI472223	VBA	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – INDUSTRY & ROBOTICS (IND)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESIIN473723	Operating Systems	1	21
	MESIIN475123	Network	1	21
		Supply Chain Management	2	27
	MESIIN472623	Control Theory	2	27
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESIIN473623	Computer Architecture	2	21
	MESIIN474623	Hardware Software Interface	2	30
		Model-Based Systems Engineering	2	30
Total			24	329

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Data Analytics	2	27
		Cobotics	2	27
		Augmented and Virtual Reality	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – IoT & CYBERSECURITY (OCC)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESIIN473723	Operating Systems	1	15
	MESIIN475123	Network	2	27
	MESIIN475623	Scrum methodology	1	15
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION		OS Architecture	2	30
	MESIIN474023	Securing Embedded Software	2	30
		HW and Abstraction	2	30
	MESIIN476223	Cybersecurity Landscape	2	30
Total			24	329

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESIIN470323	Advanced Database Management	2	27
	MESIIN472823	Software Engineering	2	27
		Dev Web Frameworks	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – DIGITAL MODELLING & MECHANICS (MNM)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	Module	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
	MESISI470123	Heat Exchangers	2	27
	MESISI470223	Fluid Mechanics	2	27
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESISI470623	Structural Analysis	2	30
		Control Theory	1	30
	MESISI473523	Probabilistic and reliability methods	2	30
		Continuum Mechanics and Finite Element Methods	3	30
Total			24	326

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESIIN473523	Dynamics of vehicles and powertrains systems	2	27
	MESIIN472623	Acoustics	2	27
	MESIIN473323	Innovation design	2	27
Total			6	81

ESILV 4th YEAR – FALL SEMESTER – HEALTH ENGINEERING & BIOTECHNOLOGY (SB)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN470223	Machine Learning	2	27
		Control theory	2	27
		Supply chain Management	2	27
PROJECT	MESIGP470123	Project	5	11
	MESIGP470323	Project Methodology	1	15
SOFT SKILLS	MATXSK470123	Hackathon A4	2	30
	MESIDV470123	Ethique de l'ingénieur	1	15
	MESILVS70123	TOEFL Preparation 1	0	18
	MESISK470223	Internship preparation (in french)	1	15
SPECIALIZATION	MESISI470723	Biology fundamentals	2	30
	MESISI471523	Health, autonomy and biotechnology: economy and organisation	2	30
	MESISI473823	Sensors and optoelectronics	2	30
	MESISI473923	Modeling biological systems	2	30
Total			24	326

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Data Analytics	2	27
		Robotics	2	27
		Augmented and Virtual Reality	2	27
Total			6	81

ESILV 5th YEAR – FALL SEMESTER – CYBERSECURITY & CLOUD COMPUTING (CCC)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
		Cloud Orchestration	2	30
		Advanced Network Security	2	30
		PenTest	2	30
		Code Gouvernance	2	30
		Governance Risk and Compliance	2	27
		Cyber Resilience & Crisis Management	2	27
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	30
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	12
THEMATIQUE		Data protection management	2	27
		PLM	2	30
PROJET		Thesis Mothodology	1	15
		Projet	4	0
Total			24	255

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Security use cases	2	27
		IT Management / ITIL	2	27
		Monitoring and issues	2	27
Total			6	85

ESILV 5th YEAR – FALL SEMESTER - DATA & ARTIFICIAL INTELLIGENCE (DIA)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN590123	Machine Learning for NLP	2	30
		Machine Learning for Computer Vision	2	30
	MESIIN591223	Graph and mining	1	15
		Explainability AI	1	15
		Webscraping & Applied ML	1	15
	MESIIN590223	Big Data Ecosystem and processing with Spark	2	30
	MESIIN590423	BI & Dataviz	1	15
	MESIIN590923	AutoML & Federated ML	1	15
	MESIIN592223	Reinforcement Learning	1	15
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	15
PROJET		Thesis Methodology	1	15
		Project	4	0
THEMATIQUE		Data protection management	2	30
		PLM	2	30
Total			24	285

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Security use cases	2	27
		IT Management / ITIL	2	27
		Monitoring and issues	2	27
Total			6	81

ESILV 5th YEAR – FALL SEMESTER – ENERGY & SUSTAINABLE CITIES (EVD)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
SPECIALISATION		Eco-design of urban systems: mobility	2	30
	MESISI592623	Energy Storage Systems	3	36
	MESISI592823	Environmental Regulation RE2020	1	18
	MESISI592923	Ecoconception & LCA Method	2	27
	MESISI593023	Sustainable Project Management	1	18
	MESISI592723	Ecodistrict	3	36
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	30
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	12
PROJET		Thesis Methodology	1	15
		Project	4	0
THEMATIQUE		Data protection management	2	27
		PLM	2	27
Total			24	285

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESISI590423	Change Management	2	27
		Industrial Design	2	27
		Sustainable Automobile Engineering	2	18
Total			6	85,5

ESILV 5th YEAR – FALL SEMESTER – FINTECH (FIN)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIFI592723	Proof of Stake	2	30
	MESIFI592823	Zero Knowledge Proofs	1	15
	MESIFI590323	Lightning Network	2	30
	MESIFI590423	Digital currencies	3	45
	MESIFI590223	Cryptofinance	1	15
	MESIFI592123	Mobile Development	1	15
PROGRAMMING		Data protection management	2	27
		Resilience Cyber	2	27
		BI	1	0
		DataViz	1	27
PROJET		Thesis Methodology	1	15
		Project	4	0
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	15
Total			24	285

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Security use cases	2	27
		IT Management / ITIL	2	27
		Monitoring and issues	2	27
Total			6	81

ESILV 5th YEAR – FALL SEMESTER – FINANCIAL ENGINEERING (IF)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIFI591123	FX markets and models	2	21
	MESIFI591223	Algorithmic trading	2	27
		Advanced fixed income with Bloomberg	2	25,5
	MESIFI590823	Model risk	1	12
	MESIFI591023	Model calibration	2	33
	MESIFI593023	Data-related innovation in finance	2	33
	MESIFI593123	Derivatives trading	1	10,5
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	12
		Thesis Methodology	1	15
	MESIGP590323	Project	4	0
		Data protection management	2	27
Total			22	274,5

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Basel 3, credit risk, and machine learning	2	30
		Advanced stochastic processes	2	27
		Diffusion models	2	24
Total			12	85

ESILV 5th YEAR – FALL SEMESTER – INDUSTRY & ROBOTICS (IND)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESISI590523	Connected Factory	3	36
	MESISI591423	Industrial Data Management	2	30
	MESIIN592723	Autonomous Embedded Systems	2	36
	MESISI591723	Multidisciplinary Design Optimization	2	24
		Safety and Security	3	36
		Multidisciplinary Design Optimization	2	24
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	15
PROJET		Thesis Methodology	1	15
	MESIGP590323	Project	4	0
		Data protection Management	2	27
		PLM	2	27
Total			24	291

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Additive Manufacturing	2	27
		Industrial and Innovation Design	2	36
		Digital Twins	2	18
Total			6	85

ESILV 5th YEAR – FALL SEMESTER – IoT & CYBERSECURITY (OCC)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
		Governance Risk and Compliance	2	27
		Cyber Resilience & Crisis Management	2	27
		Psychology & Social Engineering	2	27
		IoT Security Architecture	2	27
		IoT Pentesting	2	27
		Industrial Security	2	27
IOT SECURITY		Data protection management	2	27
		PLM	2	27
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	15
PROJECT		Thesis Methodology	1	15
		Project	4	0
Total			18	298,5

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Security use cases	2	27
		IT Management / ITIL	2	27
		Monitoring and issues	2	27
Total			6	81

ESILV 5th YEAR – FALL SEMESTER – DIGITAL MODELLING & MECHANICS (MNM)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESISI592523	Quality Management	2	30
	MESISI593223	Fracture mechanics	2	30
	MESISI592223	Aeroelasticity	2	30
	MESISI592323	Multiscale modeling and simulation	1	18
	MESISI591523	Flight mechanics and avionics	2	30
		Structural Dynamics	1	18
		Composite materials		
		Data protection management	2	27
		PLM	2	27
PROJECT		Thesis Methodology	1	15
		Project	4	0
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	15
Total			24	294

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE	MESISI592023	Sustainable Automobile Engineering	2	27
		Change management	2	27
	MESISI592123	Industrial Design	2	27
Total			12	88

ESILV 5th YEAR – FALL SEMESTER – HEALTH ENGINEERING & BIOTECHNOLOGY (SB)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN591623	Neuroengineering	2	30
	MESISI593523	Materials and implants	3	36
	MESIIN591023	Medical Computer vision and image processing	2	30
	MESIIN592823	Connected objects and IoT for human health	3	36
	MESIIN591323	HMI and sensory engineering	2	30
SOFT SKILLS	MATXSK590123	Séminaire A5 Soft Skills et Leadership	2	27
	MESILVS90123	TOEIC Preparation 5	0	36
	MESISK590123	Marketing Yourself et négociation salariale	1	12
PROJECT		Thesis Methodology	1	15
	MESIGP590323	Project	4	0
		Data protection management	2	27
		PLM	2	27
Total			24	285

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
OUVERTURE		Additive Manufacturing	2	27
		Industrial and Innovation Design	2	36
		Digital Twins	2	18
Total			6	85

Semester 2 – SPRING Semester 2024-25 (JAN-MAY)

ESILV 4th YEAR – SPRING SEMESTER – CYBERSECURITY & CLOUD COMPUTING (CCC)

MANDATORY BLOCK:

Unité d'Enseignement	Code	Module	ECTS	TEACHING HOURS
	MESIIN480323	NoSQL	2	27
	MESIIN483523	Applied cryptography	2	27
	MESISI482523	Computational modeling	2	27
PROJECT	MESIGP480223	Project	5	21
		Research methodology	1	15
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESIIN481923	Web Applications	2	30
	MESIIN482423	Code Deployment	2	30
	MESIIN484423	Advanced Infrastructure	2	30
Total			18	210

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIIN483623	Containerization Technologies	2	27
	MESIIN483723	Decentralization Technologies	2	27
	MESIIN483823	Trusted AI	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – DATA & ARTIFICIAL INTELLIGENCE (DIA)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN480323	NoSQL	2	27
	MESIIN483523	Applied cryptography	2	27
	MESISI482523	Computational modeling	2	27
PROJECT		Research methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESIIN480123	Neural Networks and Deep Learning	2	30
	MESIIN480223	Web datamining & semantics	2	30
	MESIIN484223	ML OPS	2	30
Total			18	210

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIIN483623	Containerization Technologies	2	27
	MESIIN483723	Decentralization Technologies	2	27
	MESIIN483823	Trusted AI	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – ENERGY & SUSTAINABLE CITIES (EVD)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN483923	Internet of Things	2	27
	MESISI482523	Computational modeling	2	27
	MESISI482623	Supply chain	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESISI480823	Electric Power Systems	2	27
	MESISI481823	Building Thermal Simulation	2	27
	MESISI482923	BIM	2	27
Total			18	201

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIIN484023	Image processing	2	27
	MESIIN484123	Applications of AI	2	27
		Thermochemistry	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – FINTECH (FIN)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN480323	NoSQL	2	27
	MESIIN483523	Applied cryptography	2	27
	MESISI482523	Computational modeling	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESIIN484523	Decentralized Finance	3	45
	MESIIN484623	Public-key cryptography	1	15
	MESIIN484723	Web Development	2	30
Total			18	204

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIIN483623	Containerization Technologies	2	27
	MESIIN483723	Decentralization Technologies	2	27
	MESIIN483823	Trusted AI	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – FINANCIAL ENGINEERING (IF)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIFI480723	Stochastic calculus	2	30
	MESIFI480923	Derivatives pricing and hedging	2	27
	MESISI482523	Computational modeling	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESIFI481123	Equity derivatives	1	18
	MESIFI481323	Machine learning and asset management	2	27
	MESIFI482223	Advanced times series econometrics	1	15
	MESIFI482323	Commodities markets and models	1	15
	MESIFI482423	Advanced Python, Git, Linux for Bloomberg	1	15
Total			18	213

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIFI481023	Investment techniques	2	33
	MESIFI481223	Simulation methods	2	27
	MESIFI482123	Extreme value theory for risk statistics	2	27
Total			12	88,5

ESILV 4th YEAR – SPRING SEMESTER – INDUSTRY & ROBOTICS (IND)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN483923	Internet of Things	2	27
	MESISI482523	Computational modeling	2	27
	MESISI481023	Mechatronic Systems	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION		Artificial Intelligence in Industry	2	30
		Robot Operating System	2	36
	MESISI481623	Industrial Operations Management	2	24
Total			18	210

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE		Embedded Artificial Intelligenece	2	27
		Computer Vision	2	27
		Human Machine Interaction	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – IoT & CYBERSECURITY (OCC)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN480323	NoSQL	2	27
	MESIIN483523	Applied cryptography	2	27
	MESISI482523	Computational modeling	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESIIN482123	OS Hardening	2	30
	MESIIN482223	Network Security Hardening	2	30
	MESIIN484323	Connectivity Issues	2	30
Total			18	210

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIIN483623	Containerization Technologies	2	27
	MESIIN483723	Decentralization Technologies	2	27
	MESIIN483823	Trusted AI	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – DIGITAL MODELLING & MECHANICS (MNM)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN483923	Internet of Things	2	27
	MESISI482523	Computational modeling	2	27
	MESISI482623	Supply chain	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESISI480423	Modeling and simulation of manufacturing processes	2	30
	MESISI480723	Computational fluid dynamics (CDF)	2	30
	MESISI482823	Materials and behavior	2	30
Total			18	210

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE	MESIIN484023	Image processing	2	27
	MESIIN484123	Applications of AI	2	27
		Thermochemistry	2	27
Total			12	82,5

ESILV 4th YEAR – SPRING SEMESTER – HEALTH ENGINEERING & BIOTECHNOLOGY (SB)

MANDATORY BLOCK:

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
	MESIIN483923	Internet of Things	2	27
	MESISI482523	Computational modeling	2	27
		Mechatronic systems	2	27
PROJECT		Research Methodology	1	15
	MESIGP480223	Project	5	21
SOFT SKILLS	MESILVF80123	TOEFL Preparation 2	0	18
SPECIALIZATION	MESISI483023	Ethics, quality and regulation	1	15
	MESISI483123	Health Data and security	1	15
	MESISI483223	Applied data analysis	1	15
	MESISI483323	Telehealth & Health information systems	1	15
	MESISI483423	Experimental methodology and biostatistics	2	30
Total			18	210

TEACHING UNIT	23-24 CODES	COURSE NAMES	ECTS	TEACHING HOURS
STAGE	MESIST480123	Internship A4	6	1,5
OUVERTURE		Embedded Artificial Intelligenece	2	27
		Computer Vision	2	27
		Human Machine Interaction	2	27
Total			12	82,5