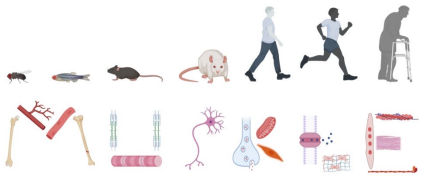
Master 1 Musculo-Skeletal System, Locomotion, Exercise (MuSkLE)



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Master Musculo-Skeletal system, Locomotion, Exercise

Master MuSkLE

International Excellence Program

Head : Pr Vincent Pialoux

Field of teaching unique in France :

From the molecular to the integrative level of the Musculo-Skeletal system

- **All courses in English -** 20 students maximum per promotion (>50% foreigners)
- **Disciplines:** Cell biology, Physiology, Biomechanics, Kinesiology, Health, Sport sciences
- **10-months internship** in one of the 19 research teams of the MuSkLE consortium
- **Incentive Scholarships** in addition to the usual internship gratification (for foreign students until february 28th) :

Call for MuSkLE Excellence Scholarships

Program 2026-2027 of the Master 1 MuSkLE

Unit Type	Full name of the Units	ECTS	Lecture (h)	Tutorial (h)	Lab work (h)
12 ECTS among	***Musculo-Skeletal system - Locomotion***				
UE	Bases of cellular mechanisms (*mandatory*)	2		18	
UE	Fundamental and clinical myology	6	36		
UE	Physiological and biomechanical bases of the musculo-skeletal system (*mandatory*)	4	12	12	
UE	Muscle function and locomotion	6		30	
UE	Biomechanics of the locomotor system	6	33	9	18
6 ECTS among	***Musculo-Skeletal system - Exercise and human performance***				
UE	Molecular genetics of neuromuscular disorders	3	12	6	
UE	Tissue morphogenesis and repair	3	7,5	10,5	
UE	Exercise physiology	6	36		
UE	Sciences 2 : Physical activity and chronic pathologies	6		33	
6 ECTS among	***From cell biology to skeletal muscle function***				
UE	Metabolic and nutritional physiopathologies from cells to patients	6	24	12	
UE	Pharmacology, toxicology and study models: from cells to animals	6	34,5	25,5	
UE	Advanced exercise physiology and biomechanics	6		45	
6 ECTS among	***From cell morphogenesis to human performance***				
UE	Molecular and cellular regulations of the cell fate	6	10	10	
UE	Functional investigation: from gene to patient	6	36		
UE	Sciences 1 : Muscular biomechanic - MuSkLE	6	13,5	3	10,5
30 ECTS	**Internship**				
UE	Internship in laboratory	30			

Cellular level

Tissular level

Integrative level

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Master 1 MuSkLE pathway graduates for 2 Mentions of Master depending academic history and study field:

- Integrative Biology and Physiology (BIP)
- Training and Optimization of Sports Performance (EOPS)

Pedagogic contacts: vincent.pialoux@univ-lyon1.fr
Administrative contacts:

- ✓ Mention EOPS: Gestion-MUSKLE-STAPS@univ-lyon1.fr
- ✓ Mention BIP: Scolarite.Biosciences@univ-lyon1.fr

More information

Major requirements (non-exhaustive list)

- Bachelor degree obtained before July 2026 in the field of Cell biology, Physiology, Biomechanics, Kinesiology, Health, Sport sciences
- Excellence of the academic background
- Internship and technical skills
- Letter of motivation
- Advanced contact with one of the team of of the MuSkLE consortium

How to apply

https://ecandidat.univ-lyon1.fr/lyon1.fr/

Application period:
1st Session: March 28th 2026 – April 22nd 2026
2nd Session: June 1st 2026 – July 2nd 2026