English-taught MSc in Computer Science

Name of degree programme: MSc in Computer Science

Academic level of degree: Master

Qualification obtained: Computer Scientist

Duration of degree programme: 4 semesters

Necessary no. credits for degree: 120 credits

Curriculum (beginning in **Autumn** semester) *(For description of courses please click course code)*

Compulsory courses:

85 credit points

Nr.	**Neptun code of course**	**Name of course**	lessons / week	seminars / week	Laboratory / week	assessment type	credit points	semester
1.	GKNM_MSTA035	Digital twins	2	4	0	v	7	1
2.	GKNM_MSTA036	Numerical linear algebra	2	2	0	v	5	1
3.	GKNM_MSTA037	Nonlinear optimization	2	2	0	v	5	1
4.	GKNM_MSTA038	Python programming	2	4	0	v	7	1
5.	GKNM_MSTA039	High performance computing	2	2	0	v	5	1
6.	GKNM_MSTA040	Machine learning	2	2	0	v	5	2
7.	GKNM_MSTA041	Web technologies	2	2	0	v	5	2
8.	GKNM_MSTA042	Project work 1	1	3	0	v	6	2
9.	GKNM_MSTA043	Project work 2	1	3	0	v	5	3

10.	GKNM_TATA061	Digitalization for industry	2	2	0	v	5	3
11.	GKNM_MSTA052	Thesis consultation	0	0	0	f	30	4

Hungarian Language (compulsory)

Nr.	Neptun code of course	Name of course	lessons / week	seminars / week	assessment type *	credit points
1	KGNB_NOKA036	Hungarian Language & Culture 1	0	3	a	0
2	KGNB_NOKA037	Hungarian Language & Culture 2	0	3	a	0

Elective courses

25 credit points should be obtained from this group of courses.

Nr.	Neptun code of course	Name of course	lessons / week	seminars / week	Laboratory / week	assessment type	credit points
1.	GKNM_MSTA044	Numerical methods for differential equations	2	2	0	v	5
2.	GKNM_MSTA045	Linear Optimization	2	2	0	v	5
3.	GKNM_MSTA046	Big Data	2	2	0	v	5
4.	GKNM_MSTA047	Model order reduction	2	2	0	v	5
5.	GKNM_MSTA048	Data assimilation	2	2	0	v	5
6.	GKNM_MSTA049	Neural networks	2	2	0	v	5
7.	GKNM_MSTA050	Selected topics in machine learning	2	2	0	v	5

8.	GKNM_MSTA051	Cloud computing	2	2	0	v	5	

Free optional courses

10 credit points should be obtained from this group of courses.

Nr.	Neptun code of course	Name of course	lessons / week	seminars / week	laboratory / week	assessment type *	credit points
	AJNM_JFTA005	Computational fluid dinamics in vehicle engineering	2	2	0	f	5
	AJNM_LSTA024	Logistics	2	2	0	v	6
	GKNM_AMTA011	CAE Methods	2	1	0	v	5
	GKNM_AUTA011	Automatic controls	2	0	0	v	5
	KGNM_NETA028	Global economics	2	0	0	v	4
	KGNM_NETA054	Advanced macroeconomics	2	0	0	v	4
	KGNM_VKTA003	Leadership and Organizational Communication	2	2	0	v	5
	KGNM_VKTA020	Innovation and Research Communication I.	0	0	0	f	5
	KGNM_VKTA021	Innovation and Research Communication II.	0	0	0	f	5

*** type of assessment**

f - evaluation based on student's performance and work during the semester

v - evaluation based on student's exam grade in a 5-grade system:

excellent (5) – good (4) – satisfactory (3) – passed (2) – fail (1)

Please find details of **thesis** and **final exams** on: https://math.sze.hu/en_GB/computer-science-msc

Programme supervisor: Dr Zoltán Horváth

CV: https://admissions.sze.hu/images/cv/CV%20-%20Zoltán%20Horváth.pdf

Information about **admission procedure**: http://admissions.sze.hu/