

# Structure of the first semester in new BSc curriculum

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## Introduction

As you might have heard, the curriculum for our Bachelor of Science (BSc) has been re-designed completely and will (most likely) go into effect in the next winter term starting on October 1, 2021. As a consequence, the courses for the beginners in the winter term 2021/22 will already be planned according to the new curriculum. This document provides a brief overview of the new courses in the first semester.

## Semester 1

VO StEOP: EMA (10 ECTS / 6 SWS)	VO Lineare Algebra 1 (4/3)
	VO Analysis 1 (4/3)
UE StEOP: EMA (6/3)	PS Analysis und Lineare Algebra 1 (4/2)
PR Grundlagen der EDV (2/1)	VU Mathematisches Programmieren (2/1)

Explanations:

- The first semester is cut in two halves, each one taking roughly 7 weeks. The first half consists of the StEOP (orientation phase) and a non-mandatory basic introduction to computers and programming. In the second half the introductory courses on analysis and linear algebra start. Furthermore, there is a mandatory course on mathematical programming.
- Since all courses run over half of the semester only, the number of SWS (=semester hours) has to be doubled if you want to know for how many academic hours (=45 minutes) you actually stand in class when you teach these courses. E.g. VO Analysis 1 has 3 semester hours, which means 6 academic hours per week of actual teaching, for half of the semester.
- The lecture course EMA (shorthand for “Einführung in das mathematische Arbeiten”) has been significantly expanded to 6 semester hours (compared to 3 in the old curriculum). This means effectively 12 academic hours of teaching every week for the first 7 weeks! Even though the number of hours has doubled, the content has not.
- The lecture course EMA is accompanied by the exercise class UE EMA. This exercise class actually consists of **two branches**: a classical problem solving class attached to the lecture course EMA (2 semester hours) and a course where we focus on the training of basic skills like manipulating terms and operating with elementary functions, etc. (“Rechenübungen”, 1 semester hour). Therefore, each group in the UE EMA will be assigned 2 teachers, one for the EMA exercises and one for the “Rechenübungen”. Due to the high student numbers in the beginning, we will need many groups and volunteers to teach the groups. When you volunteer for the UE EMA, please let us know whether you prefer teaching the “classical” EMA exercises or the “Rechenübungen”.

- Similarly, the classical exercises to Analysis 1 and Lineare Algebra 1 have been bundled together to a single exercise course “PS Analysis und Lineare Algebra 1”. Again, this is more of a formal issue. Effectively, there will be two teachers assigned to every group and the course splits in two branches, one dealing with analysis, the other with linear algebra. The only real novelty is that there will be a common grade. This was a necessary formal requirement in the design of the new curriculum in order to keep the total number of grades low.