introduction

Student Group

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Introduction

Online-course and classroom

“What, there's only the lecture online?”

“Why isn't the lecture still offered alongside the wiki?”

Perhaps you have also asked yourself similar questions. I would like to give you a short introduction here, why the lecture is offered in this way.

Nature of the study

Source: Moyan Brenn @ Wikimedia.org
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The goal of the study is to be able to deal with scientific and technical documents independently and to familiarize yourself with unfamiliar topics by means of textbooks, literature and (engineering) scientific material. To make this easier for you in the first semester, I offer you the complete script online. In the course of your (Bachelor or Master) studies, it is quite possible that you will meet professors who require you to familiarize yourself with the material without a script, using only the references provided. However, not everything is eaten as hot as it is cooked. Take advantage of the opportunities that arise! Look for like-minded people, organize yourself and support each other. It is quite possible that the person you help in the first semester can in turn support you in higher semesters.

Time Management

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Another reason for missing a lecture is that attendance time is too precious to me. I don't see any advantage in filling the attendance time with the same material that you can already find in the script or videos as well.

According to the current SPO (Studienprüfungsordnung = Study Examination Regulations), we have 2SWS (SWS = Semesterwochenstunden = semester hours = 2x 45min) attendance time available for this course. That's in complete 16,5h in the current semester. If we would like to cover the material completely classically during the attendance time, there would be hardly any time left for your concrete questions and the examples.
On the other hand, the given ECTS points result in about 50h to 60h of effort for one student, for the whole course. This means that for every 1 hour of attendance at the plenary session, you will need to prepare and follow up on your own for about 3-4 hours. “on your own” does not have to mean that you do this alone. Use the possibilities to organize yourself in groups and again: Help others.

Interaction

From a 2017 survey, we know:

1. slightly more than half of the students come from high school. A third come from vocational college and were previously in junior high school or apprenticeship.
2. The breakdown of prior experience in electronics is about 1/3 high, 1/3 medium, and 1/3 low.
3. About 10% have rated their programming experience as high, 60% as low or very low.

Source: Suju@Bixabay
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This is correlate with my assumptions with which I designed the course. There is no such thing as the “standard student” who comes to the course with exactly the prior knowledge. On the other hand, there are some of you who already have deeper experience. Some may have already been able or were required to show initiative and responsibility. Be aware: The university lives from you! Whether in e-Racing, VDI working group, student council or even the lectures / events. Have courage and take a step out of the comfort zone.

Learning aids and exercises


Source: ilias.de
(GNU GPLv3)

In each capter you can find exercises. Furthermore, I recommend to work through chapter “0. tools”, because with the tools mentioned there, you can directly implement what you have learned.

Tips

The following can help you with the lecture “Introduction to Digital Systems”:

Bonus-Feature: Tutorium

In addition to your individual preparation I can also offer you a student-led tutorial. For this, I need motivated and interested students who plan the dates and topics independently with the course. As a thank you, I can offer tutors a tutoring contract, which means they would also get a financial reward. Again, the call: **Help others**. For the winter semester 2021/22 I have already found a student.

Bonus-Feature: Lecturer Feedback

Additionally, I offer you to send me your important questions already before the plenary session. This gives me an overview of your problems in the current topic and allows me to better prepare the plenary. You are also welcome to give me praise and criticism. If you want to give feedback anonymously, just drop a few lines of text into my postal inbox (mailboxes between D- and A-building). If you want direct feedback, it is easier to write me an email directly.

Active intervention in the Presence Plenum


Source: Public Domain

Take the opportunity to ask your questions in the plenum. As already written, I would be happy if you could write me the questions in advance. Then the request for questions in the first minutes will be reduced and we will have more time for the answers. Also take the opportunity to shorten the open questions if you know the answer or an easier way - other fellow students who don't know the answer will be grateful for your word. Have courage and speak up. There are no grades in plenary and heads have not been bitten off yet.

Active preparation

Source: monicore@pixabay.com
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Whether you use the videos, internet research on the topic or the script to prepare: In any case, it is useful to **have a pen and pad ready** and take notes. Some people like to watch the videos / the script on the bus, while eating, cooking or on the toilet. But: would you do the same in a lecture? Or think of it another way: Your washing machine broke down and as a mechatronics engineer you don't miss the chance to fix it yourself. Unfortunately, you only have a desktop PC with Internet at your disposal. Wouldn't you write down one or two things before you go down to the basement and start repairing? The goal of my course is the solidification of knowledge. For many, this is done by applying the material, i.e. through (the) exercise(s). Others need discussion and controversy, i.e. the group work and the plenary. Writing down can also support the learning process. And for the exams it won't hurt to have summarized yourself the things that are important to you.