



# Midterm Survey Results

## Computer Graphics

Summer Semester 2020

Ludwig-Maximilians-Universität München

**Thank you very much for your feedbacks!**

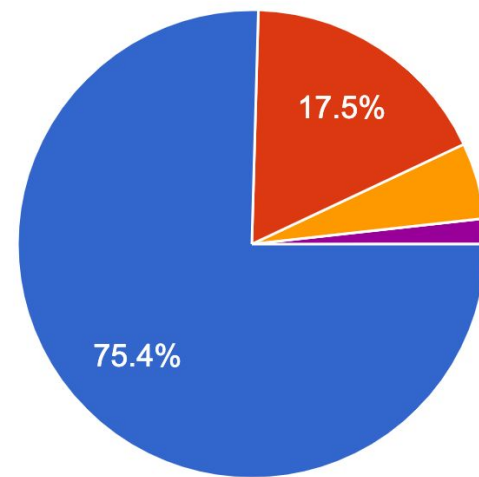


# Prerequisites

# Major & Semester

What's your major?

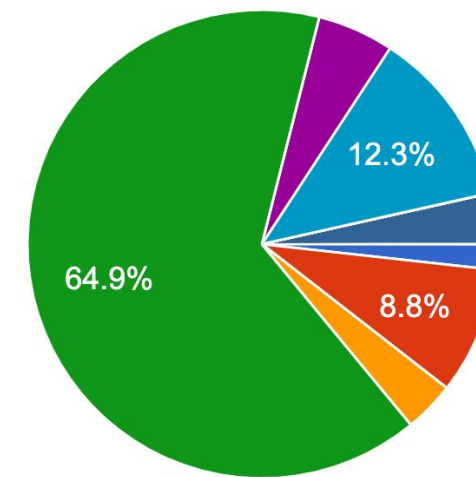
57 responses



- Medieninformatik
- Informatik
- Mensch-Computer-Interaktion
- Bioinformatik
- Kunst und Multimedia
- Mathematik
- Physik

Which semester are you in?

57 responses

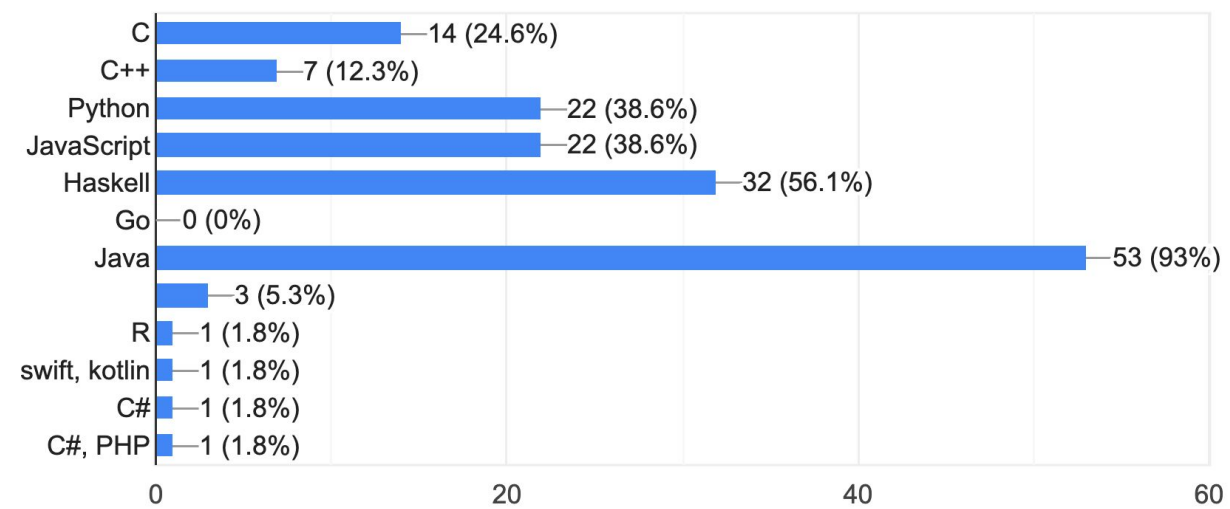


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  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
- ▲ 1/2 ▼

# Required knowledge

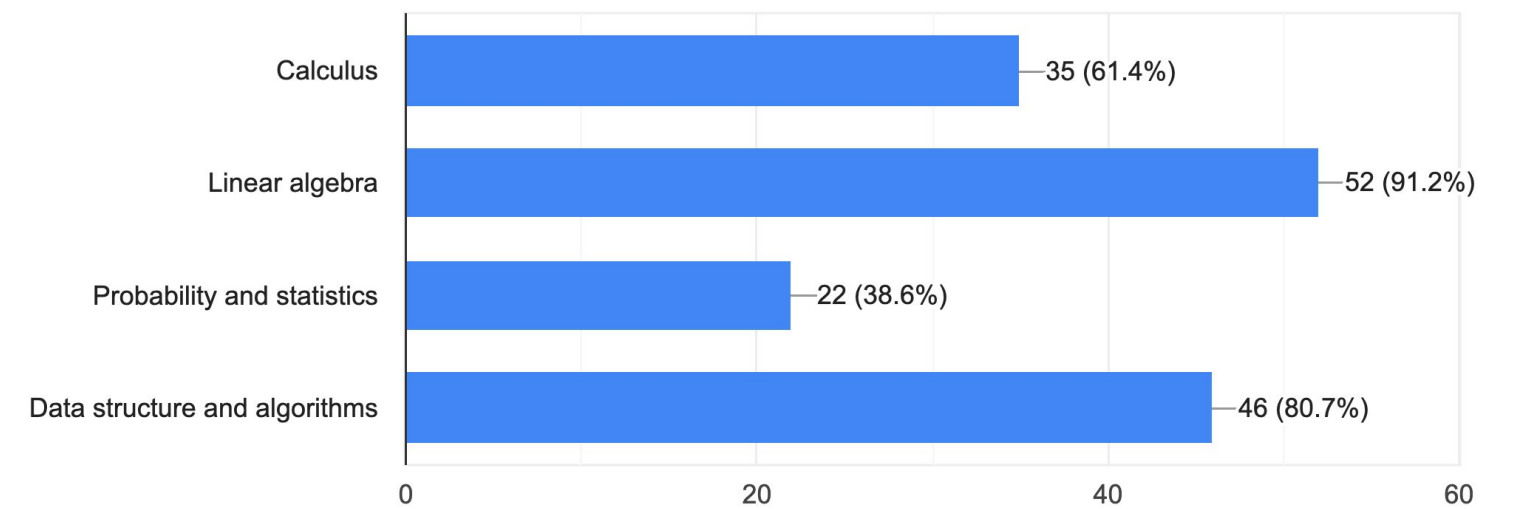
What programming languages you have already used before taking this course?

57 responses



I learned these concepts before taking this course:

57 responses

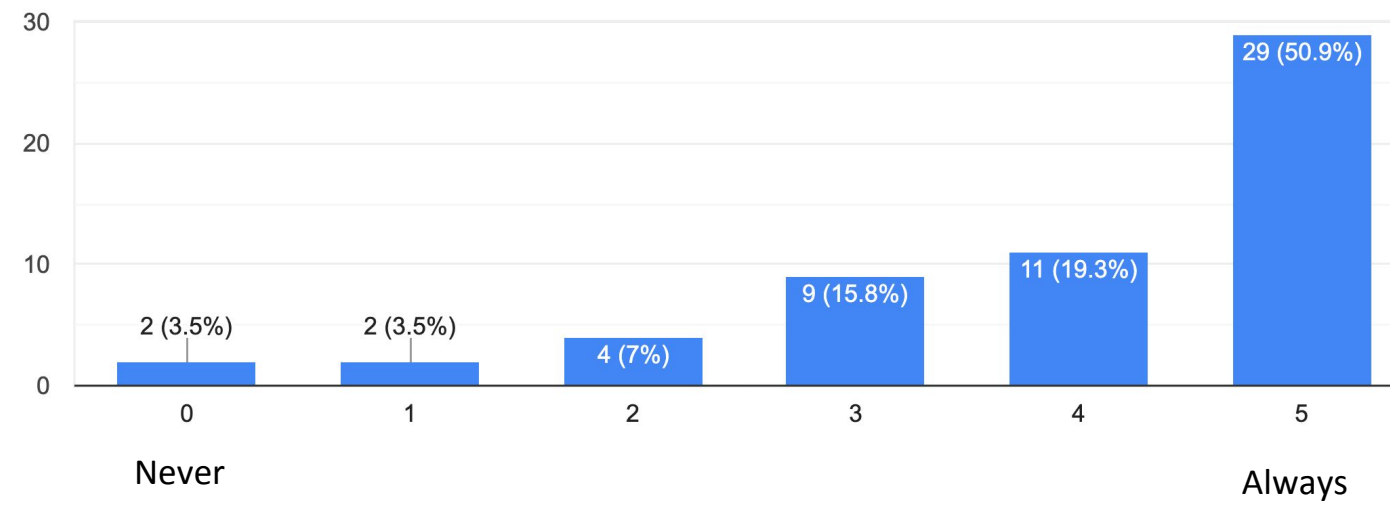


# Presence

# Presence

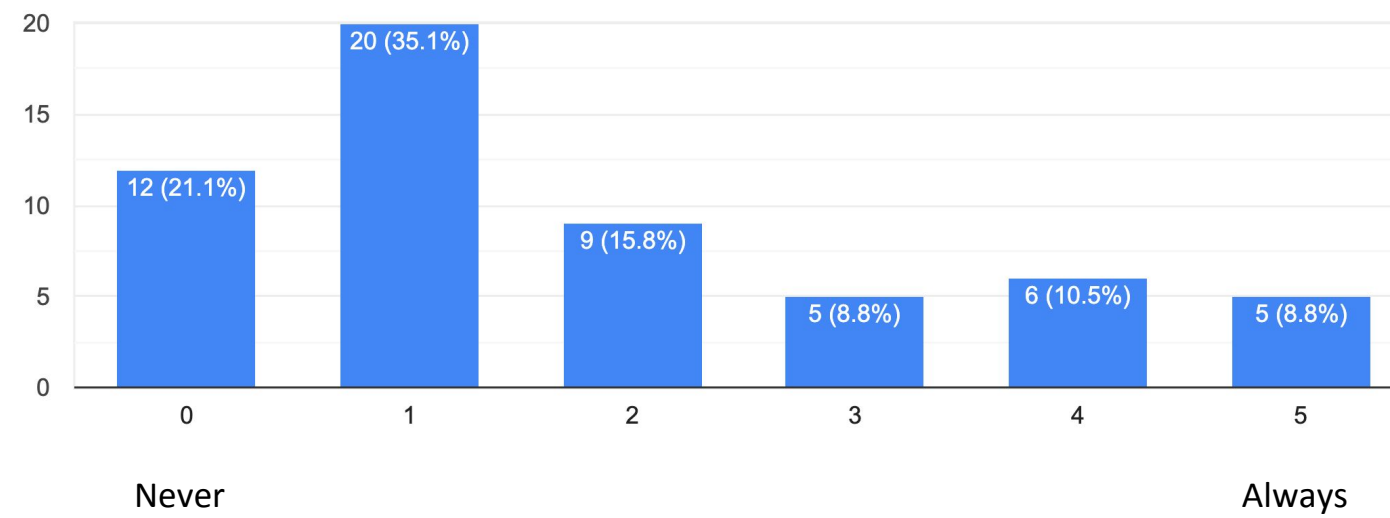
How often do you participate to the online lecture?

57 responses



How often do you contribute to the assignments?

57 responses



# What is the main reason if you don't participating to the lecture?

- Work
- Vorlesungen sind im Hinblick auf die Übungsblätter wenig aufschlussreich
- Ich empfinde es schwierig, dem Dozenten in den Vorlesungsaufzeichnungen zu zuhören, wenn man nur die Folien sieht (im Vergleich z.B. werden bei "Theoretische Informatik für Medieninformatiker" die Folien und der Dozent gezeigt). Verzögerungslaute oder "Pausen" kommen einem z.B. störender vor.
- Des Weiteren sind die Antworten der Zuhörer im Saal teilweise akustisch schlecht zu verstehen.
- I heard the lecture last year and was unable to write the exam because of illness.
- Zeit
- Not enough time
- have to catch up some topics
- I don't have the time
- Lecture videos are online anyway, nothing important is happening in the online lecture
- No reason.
- My German is really bad and I struggle to understand the lectures, let alone form questions on the subject matter.
- cannot understand



# What is the main reason if you do not upload your submission or do not participating to the tutorial session?

- Submission Format / don't fully understand some of the questions
- die Blätter sind zu zeitaufwändig, das Tutorium kaum hilfreich
- Keine Vorkenntnisse um die Aufgaben zu verstehen. Man benötigt eine Übung zum lernen und nicht zum reinen korrigieren.
- The effort is disproportionately high: the required document format is costly and unsuitable for learning mathematical methods, making this process unnecessarily difficult. In order to research, understand and finally apply the required concepts I have to plan at least 10 hours for a practice sheet and this is neither possible in my situation nor do I see the relevance of this in relation to the lecture content.
- the assignment sheets are super long
- It is too difficult and too time consuming
- Das Online-Semester ist insgesamt zeitaufwändiger als ein "normales" Semester geworden, obwohl ich mir z.B. die Hin- und Rückfahrten (insgesamt 2h am Tag) sparen würde. Daher schaffe ich es zeitlich leider nicht, die Übungsblätter komplett zu bearbeiten.
- Far too much effort for a single assignment
- I don't understand the tasks. I try to solve the exercises, but they are difficult. I always participate to the tutorial sessions.
- Too many tasks, too difficult
- I participated in the tutorials and uploaded submissions last year, but couldn't write the exam in the end.
- Difficult, time consuming, tasks that are not discussed in the lecture
- I can't fully understand the concepts that I need for the assignments beforehand. I can get to do only a bit of it, therefore I work on the assignments, and then watch the tutorials instead of submitting.
- Schaffe es meistens nicht das Blatt komplett zu lösen
- Being stuck early on and not having enough results for it to be worth submitting, not being able to catch up to the newest assignment
- Viele Vorlesungen, Deadline verpasst, englische Angaben bei deutscher Vorlesung
- I think the assignments are too hard and very often I have no idea how to solve them.
- Simply too much work for one assignment, also compared to other lectures the assignment has to be handed in before any example tasks have been discussed in the tutorial. It would be very nice if the tutorial is up to date with the assignments, meaning it teaches the technique to solve the tasks and then within one week you can work on the assignment with similar tasks in it.
- almost all questions are being asked by other students
- I find it difficult and have not enough time to upload my submission
- Difficult and extensive assignments, no grade bonus
- Not uploading: too difficult
- too hard or I don't understand the question, grammatically or else
- The time is not enough. The tutorials started late, but the submissions started right away and I needed some help to get started.
- I try it, but if I can't solve the tasks I don't want to upload my tries.
- Not Always enough time
- the problems are hard to understand (too vague/language difficulty) or too difficult in the first place
- can't solve the assignments, it's too hard and way too much
- Info not upload some assignments because they take way too much time.
- Ich gebe die Übungsblätter nicht ab, weil es meiner Meinung nach keinen Sinn macht, da die Lösungen online verfügbar sind. Ich lerne besser wenn ich meine Angaben selber korrigiere.
- takes up too much time (personally one week is not enough time)
- The assignments are way too difficult and I get frustrated so easily, and can't even ask the tutor specific questions because it's all just a huge ? in my head
- The tasks are difficult and I cannot solve them. I always take part in the tutorials.
- Ich bearbeite meistens nur einen Teil der Aufgaben (weil ich den Rest nicht so ganz verstehe) und da es keine Bonuspunkte auf Blätter gibt gebe ich nichts ab
- Can't finish them in time
- Too difficult, especially when you don't have any experience using JavaScript..! Lectures and tutorials don't have anything in common at all, if you'd ask me.

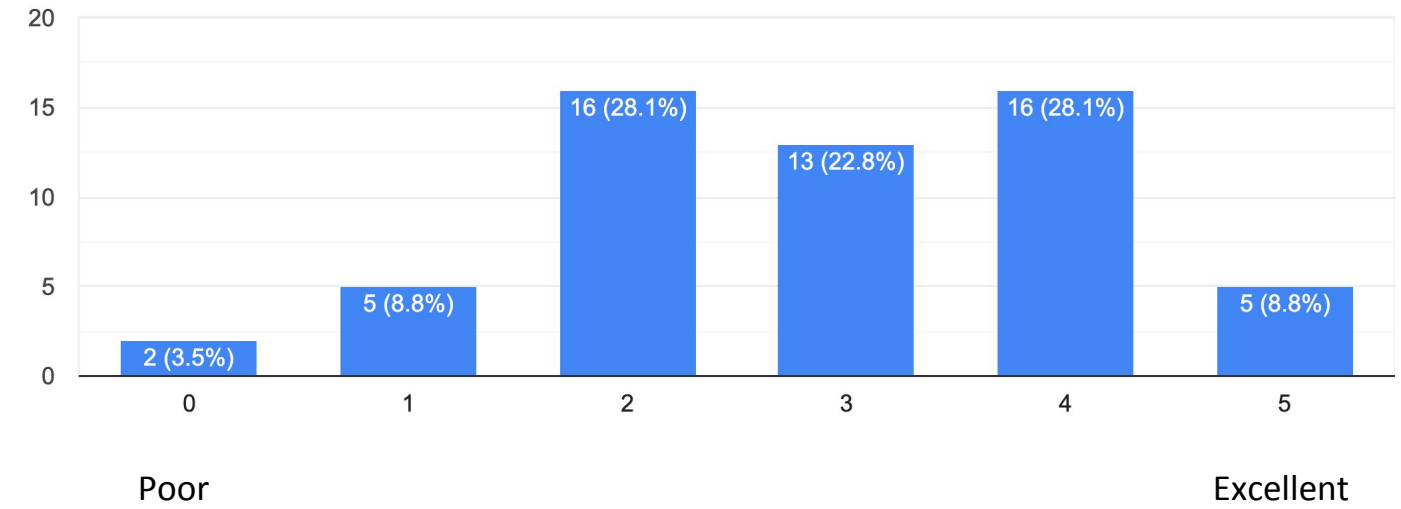
# Lectures/Tutorials

# General

So you like videos + QA more than live interactive session?

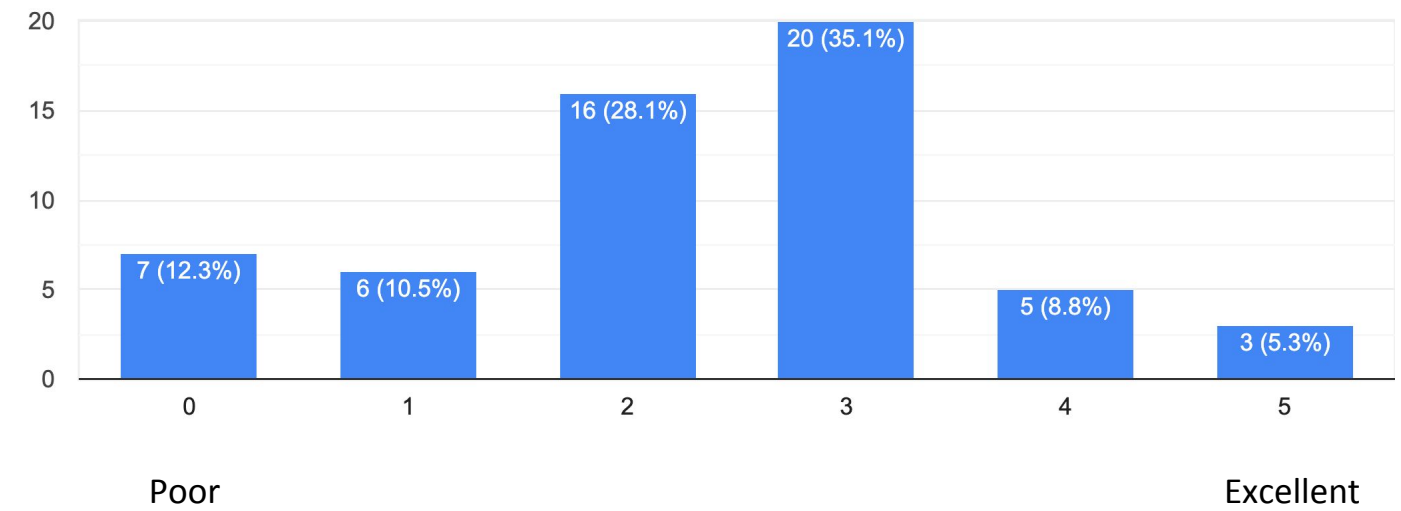
How would you rate for the online lecture experience?

57 responses



How would you rate for the online tutorial experience?

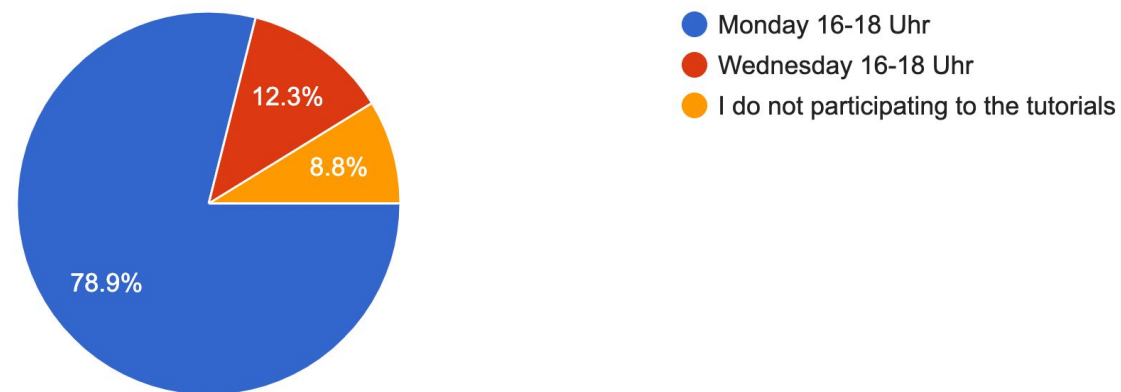
57 responses



# Tutorials

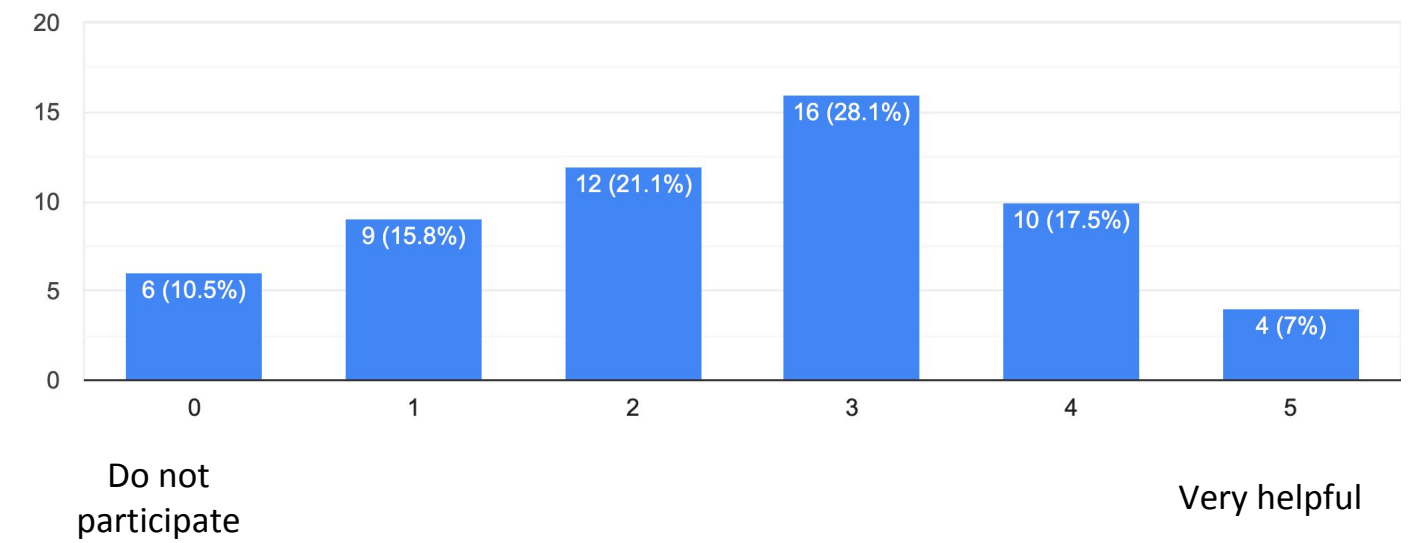
Which tutorial session are you participating in?

57 responses



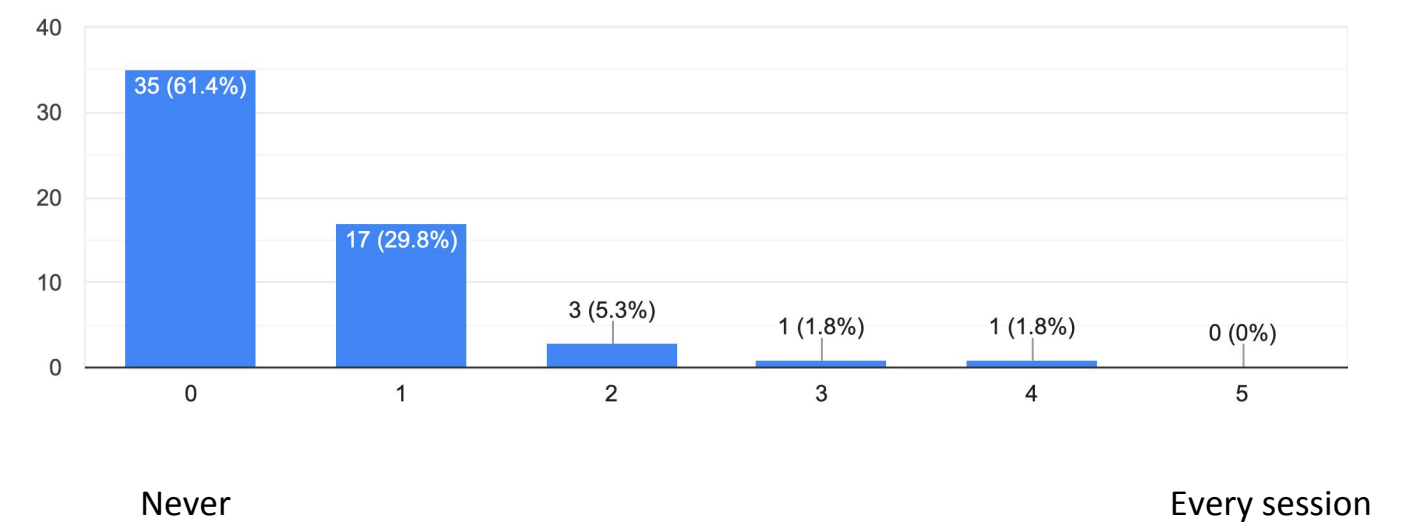
After your participation of tutorial session, do you think it helps you in understanding and solving the assignments?

57 responses



How often do you ask questions to our tutors?

57 responses

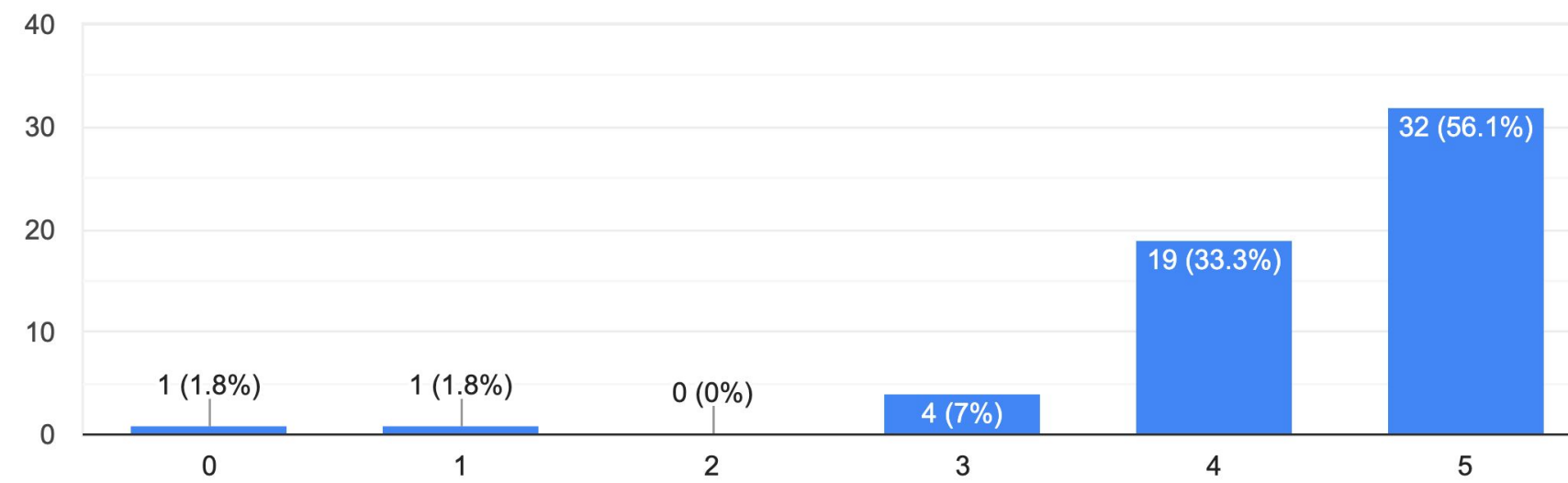


# Assignments

# Assignment Difficulty

How do you think of the difficulty of the assignments?

57 responses



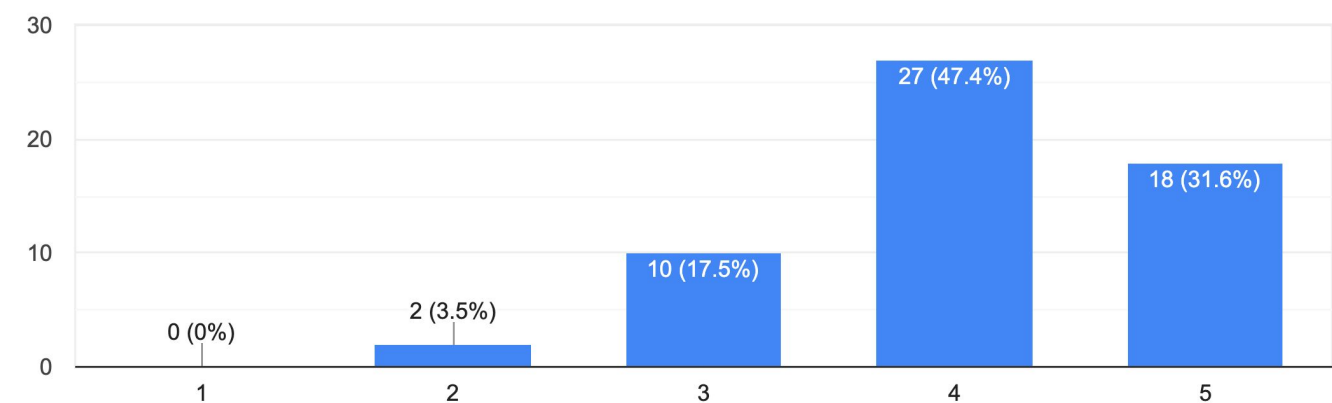
# Tools

# Zoom

- Great Alternative
- Funktioniert einwandfrei
- it's a useful tool, but sometimes I have problems because of my internet connection
- Good because its interactive
- Trotz der Kritik an Zoom habe ich kein Problem mit der Verwendung von Zoom. Für Live-Vorlesung oder Fragestunden eignet es sich auch sehr gut (durch Chat, Umfragen, Symbol "Hand heben", etc.)
- Don't mind
- Zoom is great, easy to use
- Easy to use, but only available if a meeting is opened by a host. Zoom has the reputation of bad data security.
- I think it's great!
- Sehr stabil, viele Funktionen, finde ich sehr praktisch
- Good alternative
- It's great
- There might be better tools around but it is ok
- good alternative to the normal lecture
- Its good for the lecture an the tutorials
- It's a good solution
- I think its the best platform to use for this kind of tutorials.
- it's better than any other platform
- The app itself is quite good
- Good enough given the circumstances
- Why not Jitsi?
- No problems.
- Easy to operate, understandable functions
- Erfüllt seinen Zweck und ich hatte noch keine Probleme damit
- Given the circumstances, it works well.

## How's your Zoom experience so far?

57 responses



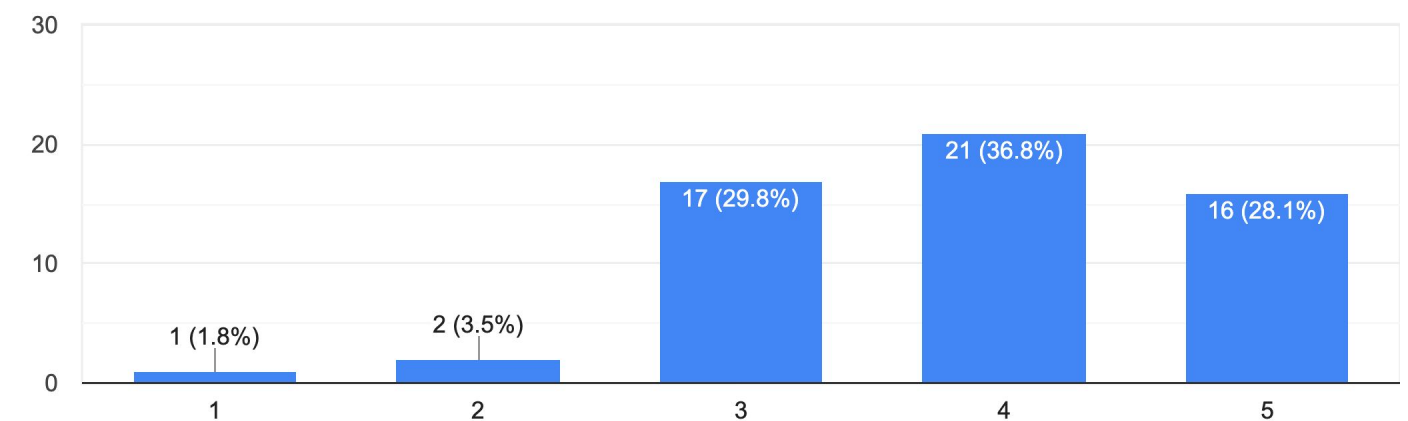


# Uni2Work

- Delivering the solutions is better here in PDF Format
- Gut, hat aber große Server Probleme
- Uniworx war übersichtlicher und "schneller" zu bedienen. Man brauchte z.B. weniger Klicks um Übungsblätter, Material, etc. herunter zu laden. Daher finde ich es sehr gut, dass das Material und die Übungsblätter bei Computergrafik auf der Vorlesungswebseite zu finden sind.
- Well structured, easy to use
- Sadly no good options for editing and viewing the course timetable.
- I like it.
- It works very well, especially appreciate the "aktuelles" page where you can see your current assignments.
- Uni2work ist viel zu oft nicht erreichbar, sobald Anmeldungen laufen für Übungen kann man eh vergessen rein zu kommen
- Better than Uniworx
- good overview of all lectures
- Uni2Work has technical problems every now and then
- It does not work properly
- I think its good, that you don't upload the online lectures on uni2work because for downloading scripts it is not good, but just for assignments its ok.
- page often shuts down especially if a big course is using it, missing a search engine for the lectures
- it's ok
- Has nothing to do with the lecture, but its just awful, down all the time
- etc.
- Uni2Work is better than moodle.
- The website often doesn't load
- easy to understand, Easy to use, well structured
- Sieht ordentlich aus aber ist schnell überlastet wenn sich viele Leute gleichzeitig einloggen wollen, außerdem sind sehr viele Klicks nötig um an die einzelnen Materialien/Informationen zu kommen aufgrund der starken Schachtelung der Website.
- It serves it's purpose, but something with mobile support that eliminates the need for an external homepage would be nice.
- Good system
- Often very unstable in the past, but it seems like it's been worked on recently...
- Perfect

## How's your Uni2Work experience so far?

57 responses

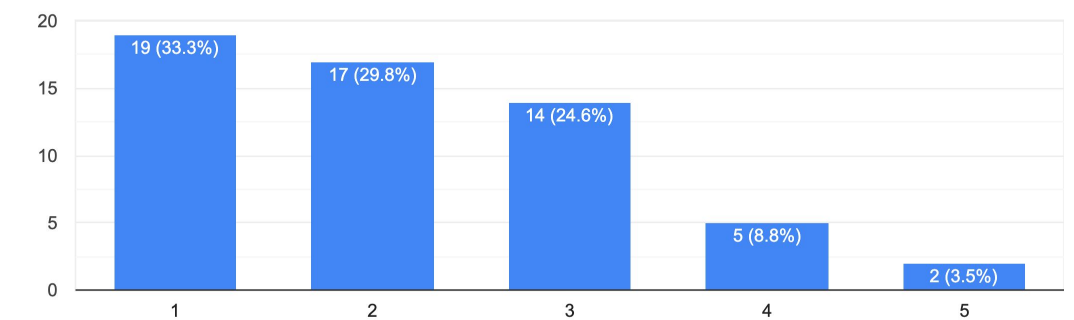


# Markdown

- Annoying, if you don't know how to do it right
- Aufwändig und nicht gut, um zu rechnen.
- The required document format is costly and unsuitable for learning mathematical methods and makes this process unnecessarily difficult. The high expenditure of time resulting from the content-related requirements is thus increased unnecessarily.
- it's a bit tedious to be honest! If we could hand in handwritten solutions I might hand in more exercise sheets.
- Very time consuming especially for math formulas
- Too tedious
- Why not Word
- Good format, especially regarding the preparation for the bachelor thesis.
- A bit complex for big formulas and structures (e.g. matrices)
- Sometimes finicky to use for simple equations, but I understand its usage for uniformity.
- I understand that it's better to correct than handwritten submissions, but it took a bit to learn it, especially how to present a matrix
- Time consuming
- It is not particularly hard to use but a lot of especially mathematical expressions aren't implementable and especially when solving mathematical calculations one has to do them by hand so it would be easier to submit a pdf (under the condition it is written in a clear and readable way) instead of copying the results every time which can be time consuming.
- did not use it yet
- Great
- too much unnecessary effort, just accept hand-written scans/pdf already
- simple
- it was good to learn markdown, but it takes way too much time to write all the mathematical stuff, we don't have time for that.
- Too complicated
- Tedious but Looks nice
- neutral
- never used it
- Matrices in Markdown? a million things I would rather do
- At least it is clear WHAT to use
- It is interesting, but it takes much more time and effort to type down a simple formula. It shouldn't be mandatory to use Markdown files. Simple PDF scans or .txt files are preferred.
- for text answers it's great, for mathematical questions it's a lot of work to type it in latex... but I guess you could also just insert an image. So it's fine
- I never uploaded any homework so I can't answer the question above
- Ich hab nicht wirklich verstanden in welcher Genauigkeit man seine Abgaben in Markdown eintragen soll, also ob zB. ein Exponent wirklich mit dem Markdown-Befehl für Exponent geschrieben werden muss. Wenn ja, dann ist das sehr viel Aufwand, der schnell langweilig wird. Ein kleiner Überblick von Markdown, wo es eingesetzt wird und warum es sich lohnt sich einen Einblick zu verschaffen, wäre meiner Meinung nach sinnvoller gewesen. (Oder ganz weglassen).
- It works well. I would like to be able to use LATEX for mathematics, otherwise I usually just use a picture of handwritten work.
- zu kompliziert
- Takes way too long to write everything down, other options should be possible (scans etc)
- Unnecessary in my opinion.

How's your Markdown experience for submission so far?

57 responses

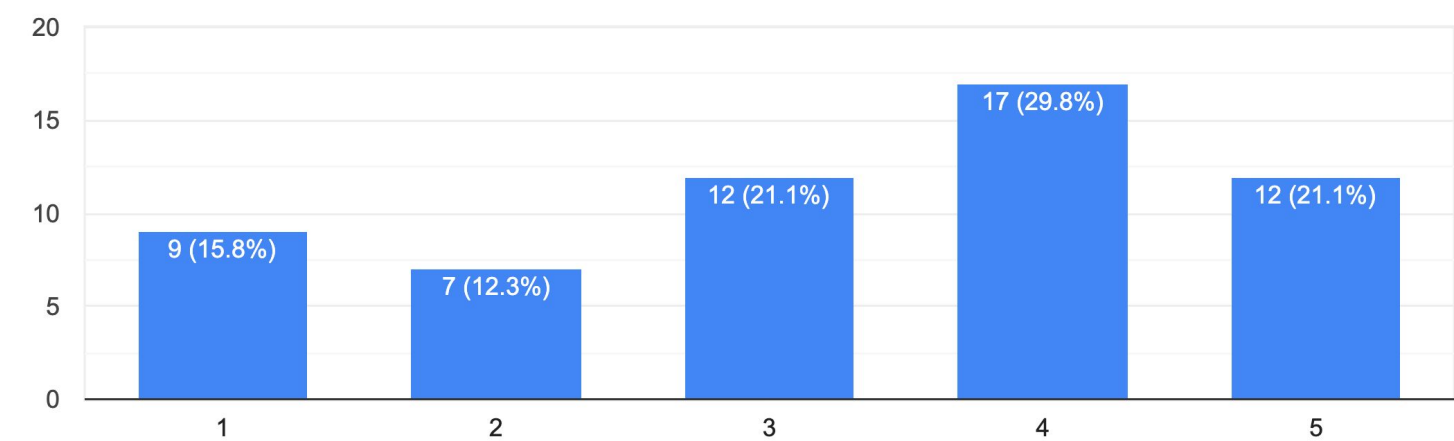


# GitHub

- I don't use it, because it is too much for an assignment
- perfect!
- Works as it should
- Was odd at the start, but works good once you get it.
- Github ist grundsätzlich hilfreich
- good
- Good Idea
- i like
- a download link is sufficien
- Too complicated
- dunno much about it
- haven't had any problems with it yet
- The code skeletons should be uploaded earlier. On another note, even though I am confident in using git, I am pretty sure most of my fellow students aren't.
- Great
- What the hell is GitHub?
- Ich fühlte mich eingangs ziemlich erschlagen, da ich noch nie mit GitHub gearbeitet hatte aber man findet schnell rein.
- Works great. No qualms.
- Good
- Reliable and well integrated in all common coding platforms...

## How's your GitHub experience in terms of accessing code skeleton?

57 responses

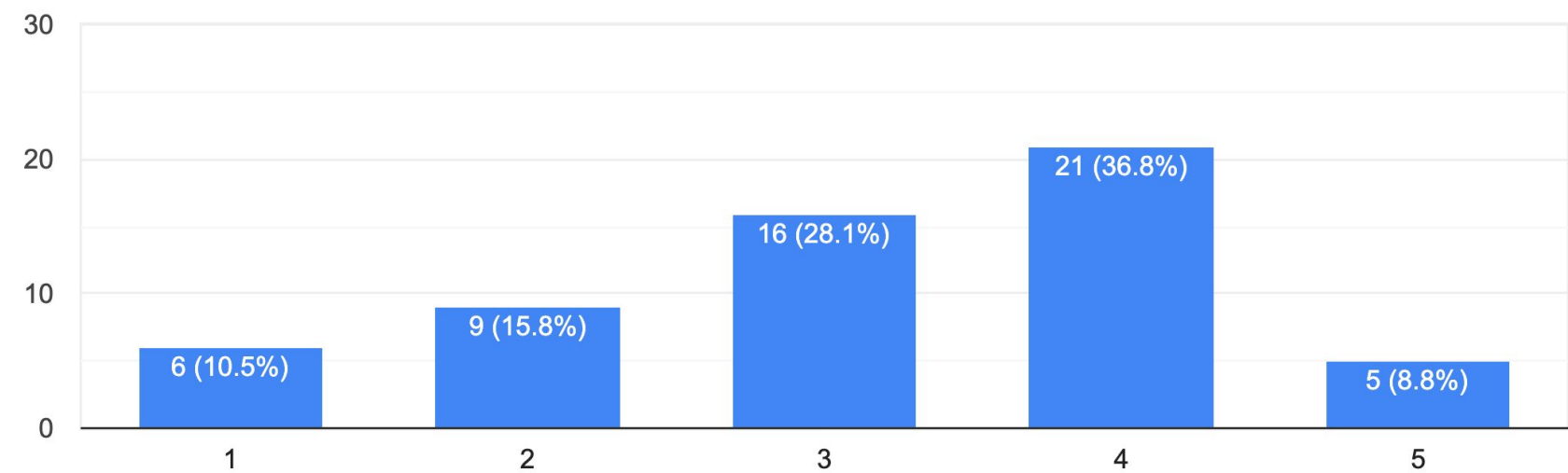


# Google Slides

- PDF's are better
- Text lässt sich nicht kopieren
- it's good, because you can also look sth up after the tutorial
- Fände es gut, wenn man die Folien herunterladen könnte.
- Can't be downloaded
- Hätte sie lieber als PDF aber nur zum lesen ist es in Ordnung
- It is different from what I'm used to but does what it should do! sadly you cant download the slides to edit them or take notes on them during the exercise so I always have to screenshot them one by one to be able to take direct notes. But if I'm not mistaken that was discussed and we can't get them as pdf, but its not that much of a trouble.
- Herunterladen der Folien wäre viel besser
- pdf files are sufficient + there should be an option to download those files
- I would like to be able to download/print the slides.
- Why Google slides??? It would be easier if we can just download the slides
- For my way of using the information it works good. But its important that you upload it as pdf towards the end of the semester.
- please upload PDFs of the slides since many are using them to take notes along the way to have everything in one place
- ok
- Die Lösungen werden gut und übersichtlich in Google Slides präsentiert. Schade, dass man sich die Folien nicht herunterladen kann.
- Good
- There are no problems, but why not simply upload those slides on uni2work? It would be better to download them.
- What is google slides???
- Als PDF zur Verfügung stellen wäre sinnvoller, damit man die Slides auch offline zur Verfügung hat.
- I just download the slides from the link on the external homepage?
- Das ist sehr blöd, dass man die nicht runterladen darf und eigene Notizen darauf machen.
- Not a fan of it
- Would appreciate the PDF format way more...

## How's your Google Slides experience in terms of reading slides?

57 responses

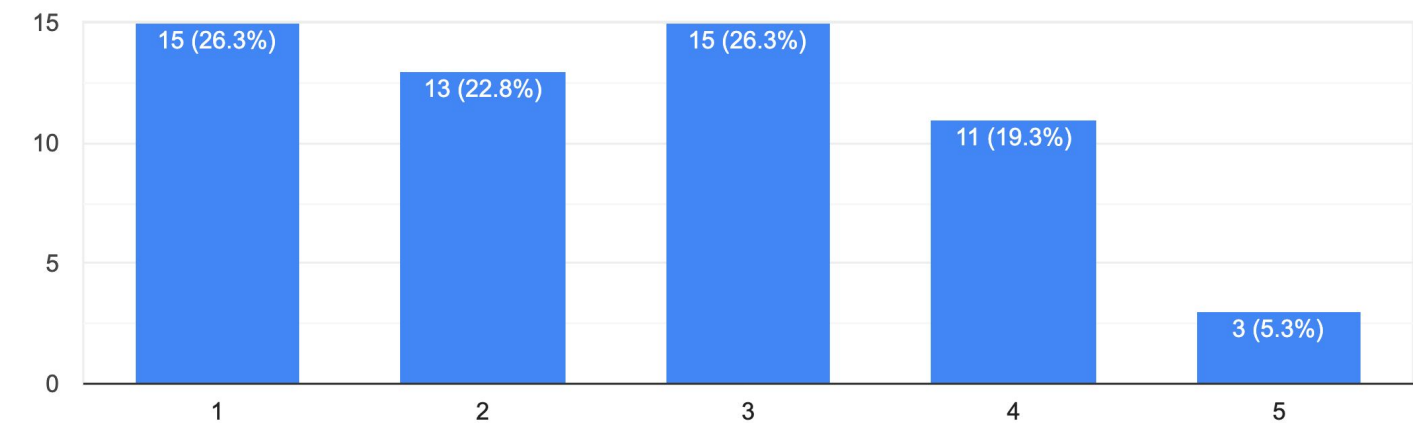


# Slack

- I don't use it
- good tool
- It's ok.
- It's ok, but it took me a bit to register with the cip-Account
- It works well, we have some other subject who use it too. But it would be nicer if the faculties could agree on one service, since we have to use moodle, zoom, discord, slack, zulip, lmu cast, uni2work and sometimes even the subjects own lmu website despite uni2work being there to assist with that. It would be perfect if there was a discussion/question page integrated in the "Übungsblätter" section in uni2work, or something similar. Without a tab-organizer I would be completely lost orientation wise because i need about 3-5 tabs per subject.
- Slack gibt am Handy keine Benachrichtigungen auch wenn das eingestellt ist
- I dont use it
- good
- Too complicated
- I don't have a account of cip.
- I dont have access
- haven't used it yet
- not the best
- Questions are getting answered with: well fix your problem thats part of being a programmer. kills the motivation to ask anything. Also, the strict plagiarism rules are way too much for assignments that dont give a bonus.
- Slack is a good platform. It would be great if more lectures use it for discussions.
- Mir gefällt es gut aber es ist NOCH eine zusätzliche Ressource für Information, von denen es im Informatikstudium schon zahlreiche gibt (Uni2Work, Moodle, Vorlesungswebsites etc.). Kann verwirrend oder zu viel werden.
- Works well. Doesn't seem to be utilized by too many students, though.
- Couldn't access it yet
- Was helpful for my problems, fast responds are very nice!

How's your Slack experience so far?

57 responses



# General Feedbacks

# Feedbacks to Tutors

- The exercise does not offer any assistance in working on and approaching the tasks set. Solutions are presented without the concrete approach being explained. I find the format unsuitable for an introductory course in computer graphics because no approach is explained and no knowledge or skills are acquired through the exercise to support one in working on topic-related tasks.
- Bitte alle Aufgaben durchsprechen und vorrechnen
- The information on the slides is always explained understandably and the pace is very good too, the tutor answers all questions and explains really well. I'm glad there was more focus on the structure and "meaning" behind what we are doing in today's lecture.
- Too many assignments, Too difficult
- Ich denke es wäre besser, wenn ihr weniger Aufgaben nehmen würdet und dafür mehr Zeit für die Erklärung nehmen könntet, da ich oft nicht mitdenken kann. Vor allem bei JavaScript.
- You explain some stuff a bit too much in detail, and other stuff, which is for me personally harder to understand, is not explained at all. The stuff that IS explained is explained very well
- Mein Tutor ist ok
- More explanation instead of reading the solutions to us, especially regarding JS...

# Feedbacks to Assistants

- Please don't make the delivery so complicated!
- The submission works the same everywhere and we are used to get PDFs.
- Our way to working is designed for this.
- If everyone uses a new program it leads to chaos and demotivates me to hand in the sheets.
- The assignment sheets are pretty long and it might be better to have some exercises which are for the tutorial and some which are for us to hand in. You also could have done more of an introduction to the programming tasks!
- Bitte Folien einfach auf deutsch machen
- The responds to questions are always very fast and helpful.
- Es ist etwas unpraktisch, dass die Vorlesung auf deutsch ist (was ich für eine Bachelorveranstaltung auch angebracht finde) und die Übungen englisch. Die deutsche Version der Website ist leider auch ein denglich Mix
- Maybe it would be nice to have easier assignments
- In other subjects we get a very detailed Solution Video for each Assignment where a tutor does the assignments, instead of a online zoom tutorial. This is much more useful to understand the topics, as you can watch the videos in your own tempo and you can watch the videos again later.
- Too many assignments, Too difficult
- I think the assignments contain too much tasks, especially in the coding challenges I got totally out.
- can we minimize the assignments please, it's really just too much and also make it easier
- The assignments difficulty levels are too high. I am a competent programmer but this feels even worse than the PGDP at the TUM which I passed.
- There is no help at all, not only dont you get to learn the basics, but also not the basics of three js. How should I know how to use a perlin noise or bezier curve, i dont even know how to put a cube in the scene...
- Die Übungsblätter sind kompliziert und benötigen viel Zeit, viel Text auf nicht guten English. Die Blätter von letztes Jahr waren besser!
- I don't know if it's due to the lack of 1:1 feedback in tutorials or the subject is just pretty hard and a lot to learn, but especially the coding tasks are sooooo timeconsuming to me, that i'm often just incapable of doing the worksheets...



# Feedbacks to Professor

- Great Lecture!
- But it could be closer to the assignments.
- Ich schaffe es nicht bis zum Abgabzeitpunkt. Diese Blätter sind so aufwändig und brauchen so viel Zeit, das ist demotivierend und zeitlich schwierig, wenn man alle Vorlesungen anschaut und in die Übung geht. Dafür müsste ich meine halbe Woche investieren, aber ich habe noch 4 andere Vorlesungen, die auch zeitintensiv sind, aber lange nicht so wie CG 1. Es wäre einfacher, wenn man sich nicht alles selber beibringen müsste, sondern zumindest 1-2 Aufgabestellungen pro Blatt vorher schonmal in einer ähnlichen Konstellation besprochen werden würden, wie es sonst immer in Präsenzübungen war. Dann würde es auch reichen, schriftlich die Lösung der Übungsblätter zu veröffentlichen und nur Fragen in den Übungen zu beantworten, wenn welche auftauchen.
- Vorlesungsfolien sind überladen
- The lecture is really great and you bring the subjects contents across in an entertaining kind of way with real examples and questions to think for ourselves which keeps it very interesting. It's also explained very understandable.
- I think it would be great if it were more involved with the assignments.
- Das Format der Vorlesung ist sehr gut. Die Fragestunde im Plenum ist super, besser als das Format das ursprünglich geplant war.
- u rock
- coffee ;)
- Not seing what you are pointing on is very confusing
- The lecture has nothing to do with the assignments, other than that its very interesting and easy enough to follow.
- It really is a good lecture, and I enjoy watching the streams.
- Ich belege dieses Semester auch MMI 1 und in einer der Vorlesungs Aufzeichnungen haben sie gesagt: sie halten die PowerPoint Folien eher leerer da es nicht möglich ist die Folien zu lesen und gleichzeitig das gesagte das Prof. aufzunehmen (vorausgesetzt das Gesproche unterscheidet sich vom Text der Folien).
- In CG sind die Folien aber eher textlastig und auf Englisch. Dazu halten sie die Vorlesung auf Deutsch das heißt mein Gehirn muss schon so Multi tasking fähig sein zu lesen und gleichzeitig zuzuhören und währenddessen zwischen zwei Sprachen hin und her switchen... laut der premisse aus MMI kann das ja gar nicht funktionieren.
- I've emailed once or twice, without receiving a response.
- Der Stoff der Vorlesung und der Tutorien weicht mitunter stark voneinander ab, dadurch wird der Workload für die ECTS meiner Meinung nach etwas unverhältnismäßig... Dieses Semester ist der Arbeitsaufwand durch die nötige Selbstorganisation ohnehin schon immens gestiegen.

# Other Feedbacks

- Leider lassen sich die Vorlesungsaufzeichnungen nicht korrekt vorspulen und die Seite bricht hin und wieder zusammen. Nach einem Neuladen muss man somit immer wieder am Anfang anfangen.
- I have the feeling that the connection between lecture content and exercise is very loose. Furthermore I cannot understand how the exercise should prepare us for the exam, because time-consuming calculations or general tasks are demanded and then it is commented that something like that is actually not relevant and we don't actually need the application. I do not understand the sense of such tasks.
- It would be really nice if the worksheets would be parallel - right now there's a week in between uploading and the tutorial and that's just too long, especially if there were problems in understanding.
- Also it would be nice if the exercises could be a little bit shorter it's too time consuming especially with mark down.
- Thank you though for already integrating feedback it's been already helpful :)
- Mir wäre es wichtig, dass die Computergrafik-Prüfung in diesem Semester nicht auf das nächste Jahr verschoben wird. Man weiß ja nicht, wie lange das mit der aktuellen Situation noch weitergeht. Die Nachprüfungen vom Wintersemester 19/20 wurden ja auch verschoben oder finden gar nicht mehr statt.
- 
- Ich finde es sehr gut, dass alle Information zum Kurs, Material, etc. auf der Vorlesungswebseite zu finden sind. Und die Vorlesungsaufzeichnungen heruntergeladen werden können.
- Es wäre super, wenn die Tutorien aufgenommen werden würden , damit wir die Lösungswege der Aufgaben öfters anschauen könnten. Bzw Hochladen von Erklärvideos wäre super hilfreich
- Deutsch ist nicht meine Muttersprache, deswegen bin ich manchmal langsamer beim Verstehen des Stoffes. Wenn ich die Tutorien öfters anhören/ansehen könnte, würde es einiges einfacher machen
- Very good lecture, although exercises are purely mathematic - would like to see a more thematic approach (more questions about concept, like in Computer networks and distributed systems, a bit less mathematics)
- I heard the lecture last year but couldn't write the exam because of illness and an early startig semester abroad. So I like, that the lecture is the same, but the tutorials seem to be much more difficult.
- Übungsaufgaben sollten mehr an der vorlesung und klausur orientiert sein; markdown zu lernen kann zwar vorteilhaft sein, ist aber sehr zeitaufwendig;
- Could we have the concepts explained to us before we get the assignments, just like you normally get the lecture slides and then, afterwards, the exercises related to it, since the assignments are mostly based off of the tutorial? Unless of course the web links with online tutorials we got are mandatory to get through the course in which case I think we need less exercises per assignment to have more time to find the relevant information for it ourselves. That would be totally fine too. It can be a big workload especially with a lot of subjects now starting to grade and change all the assignments in exchange for an exam.
- Thank you for this survey, for asking and doing your best to make this semester as "normal" as possible!!
- Hoffentlich wird die Prüfung in einer guten Form stattfinden, die sich nicht allzu sehr von den Ansprüchen einer Präsenzklausur unterscheidet. (sowohl Theorie als auch Praxis zu gleichen Teilen abfragen wäre sehr gut)
- Da in dem online Semester viele Vorlesungen mehr Aufwand machen als sonst, bin ich gerade bei Computergrafik weit hinterher, da ich ja das ganze auch verstehen will.
- if we use the English(German)version powerpoint its probably better to explain it in English(German
- ) as well, two mixed together drawbacks the concentration and efficiency
- 
- the assignments shouldn't be so hard to solve, it seems like no one is able to solve it. And this course is not the only class we have, so having to do 4 pages of assignments every week is not reasonable at all.
- note: I am officially in the second semester of Medieninformatik but have the ECTS of being in the Fourth.
- Eine kurze Erklärung, was man mit den Dateien in GitHub anstellen soll und wie und wo man das ganze ausführt würde mit Sicherheit vielen Leuten Nerven und Frustration sparen.
- Blätter auf Deutsch und nicht so viel Aufgaben, Studenten haben auch andere Kursen.

# Response of Selected Feedbacks

# "Assignments are too long and too difficult!"

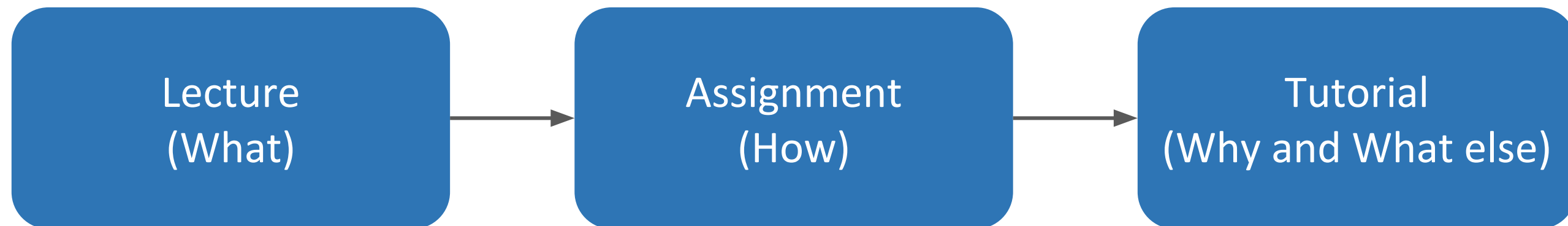
Some facts:

- Yes, it is not easy, but definitely not "too difficult"
- This is how it was planned, irrelevant to the pandemic
- Some say this year got too difficult than last year and it was better last year. But students complained about the difficulty of those old, outdated assignments, too
- The assignments, solution, and slides are prepared <10 hours
- There is no assignment that requires you to code more than 100 lines of code
- Submission is optional and you don't need to complete every task for the submission
- If you can't solve anything, then it is your problem

# "Mismatch between lecture and assignments!"

Some facts:

- There is no mismatch, and all about fundamental computer graphics
- You need a few relevant knowledge outside the lecture to solve the assignments for sure
- Same applies in other courses
- You learn everything by searching, reading, and doing
- The tutorial sessions are for you to hear the further explanation of why we have those assignments and discuss your questions



# "Topics are not helpful for the exam!"

Some facts:

- So you know how the exam looks like? Trust me. You will see how relevant they are
- You say "I learned X in CG" if you can implement X; otherwise, it's just a lie
- You may just want to pass the course, but you need to show your effort first

# "Slides should be written in German!"

Some facts:

- Materials are in English because it is consistent with the lecture slides
- If you want lecture slides in German, talk to the professor; if lecture slides are revised into German, then other materials will be written in German, too
- English is sometimes better for describing computer graphics technical terminologies

# Markdown v.s. Handwrite Pictures in a PDF

Some facts:

- You will write your thesis in LaTeX, and you will see how easier markdown is
- PDF is absolutely great for you, but it is difficult and chaos for us
- You are in this course so you follow the course rules not we follow your hobbies



# Google Slides v.s. PDF

Some facts:

- As you wish, we uploaded the PDF.
- But warning: PDFs may be outdated
- Some notes are only in Google slides and not appear in a PDF

**Don't be shy.  
Ask questions.  
Take your time.  
Don't panic.**