1.3
The Practical Bits

In These Slides

- Administrative issues
  - Prerequisites
  - What you need to do in order to pass
  - Contact info
- Assignment policies
  - Lab office hours & Slack
  - Extra credit
  - Collaboration
  - Deadlines, etc.
- A tour of the assignments

Administrivia: Prerequisites

- Not strictly enforced
- Calculus, Linear Algebra
  - Solving equations, derivatives, integrals
  - Vectors, matrices, basis, solving systems of equations

- All assignments are in C++
  - *Review/introductory video lectures by former TA Yrjö Peussa* available on YouTube
  - ***Highly recommended if you haven't touched C++***

Administrivia: Website & Contact

- Course website at MyCourses
  - https://mycourses.aalto.fi/course/view.php?id=32362
  - Official Announcements
  - Slides and videos (posted twice a week)
  - Assignments
  - Grades

Administrivia: Grading Policy

- Assignments: 95%
  - ~Two-week programming assignments
  - Must be completed individually
  - *No final project*

- Participation: 5%
  - Forum activity (details follow in a few slides)

Minimum Requirements

- To successfully complete the class, you need..
  - To get >0 points from at least 4 out of 6 assignments
    - The assignment handouts have very clear instructions towards the minimum credit
  - A total of 24 points (out of nominal maximum 60), summed up from all the assignments
- To get a 5, you need a 100% score
  - = full 60 assignment points full participation score
  - but assignment extra credit compensates for exams!
    - open-ended! All-time high is now **over 500** points

Total Score Computation

- Your final score =
  0.95 * 100% * assignment_points / 60 +
  0.05 * 100% * participation_score

- The result is a percentage *that may exceed 100%* if you do extra credit in the assignments
  - From previous slide: final score >= 100 required for 5

Assignments Info

- C++ using MS Visual Studio 2019

- Turn in code+data in .zip
  - **Must compile and run in the VDI virtual machine!**
  - Detailed instructions in handouts
  - Submit through MyCourses

- Always turn in a README file
  - Describe problems
  - Explain partially-working code
  - Say how long the assignment took

Remote Working / COVID-19

- No contact teaching

- No physical access to classrooms

- You can work either on your own machine or use the Aalto VDI virtual machine service

- See separate guide in Materials section!

Administrivia: Assignments

- **The assignments are a lot of work if you're not familiar with C++. Really.**
  - Start early!

- Late policy
  - **The deadline is absolute: 0 if not on time**
  - Due Sundays @ 23.59
  - Extensions only considered if requested 1 week before due date
  - Medical problems must be documented by professionals

Q&A Forums on Slack

- When you run into problems with your assignment, ask on the Slack forum!
  - *not* course staff directly
  - Why? You can tap into the collective knowledge of your classmates and get answers faster
  - Why? You get credit for being active
  - Course staff will also monitor the forums, *but not during evenings or weekends*

Slack Etiquette

- Register with your full name (First & Last), and use the same email that you use in Sisu

- Use the thread functionality to make sure questions and answers are linked together!

- Each Assignment has its own channel

Administrivia: Assignments

- Collaboration policy
  - You can (and should!) chat, but code on your own
    - We may use automated plagiarism detection
  - Acknowledge your collaboration (in README)
  - Help others on forums!
    (next slide)

- Graphics really is fun! Get a community going.

Tentative Assignment Schedule

- On MyCourses front page

Assignments: Scoring

- Fulfil all requirements: 10 points
  - Partial success judged case by case
- All assignments include starter code and detailed instructions, most often going into more detail than lectures
  - You *may* also code from scratch!

- Each assignment includes a number of extra credit tasks ranging from easy to possibly very hard
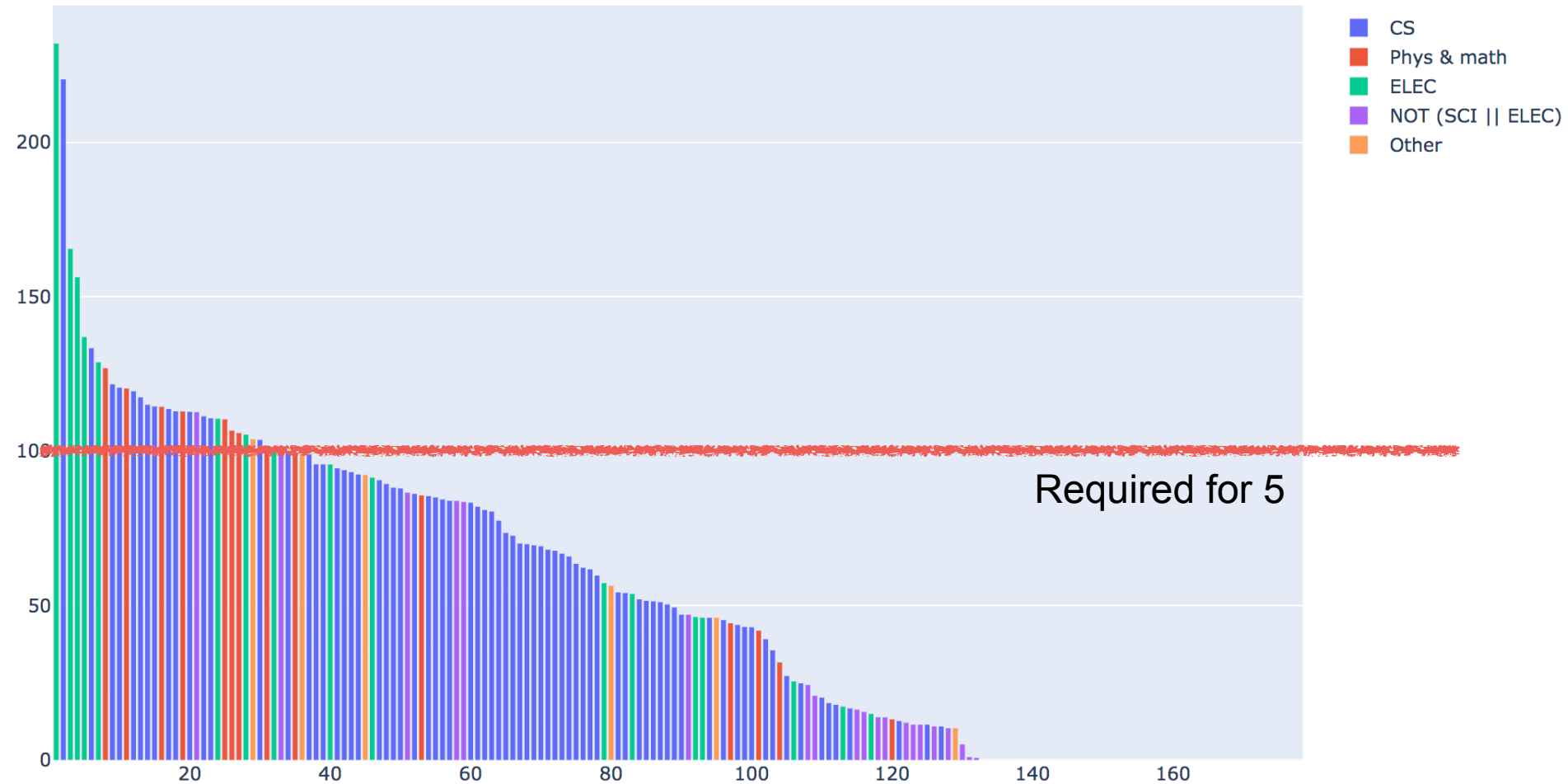 - Open-ended scale

Extra Credit: Why Bother?

- First and foremost: It's fun!

Extra Credit: Why Bother?

- Do well, and you will get noticed.

- Students from previous years…
  - are writing graphics code at Remedy, Futuremark/UL Benchmarks, Umbra, Frozenbyte, and others
  - have done a PhD at UCL, worked on Facebook's 3D Photos, etc.
  - are working on Star Wars movies at ILM in London
  - are studying at ETH Zürich
  - …

Final scores, 2018

rank (x) vs. total score (y)

Required for 5

18

Administrivia: Lab & Office Hours

- There are no fixed office hours for the TAs
- Jaakko's office hour policy listed on <u>his website</u>

- **Remember: questions on class content and assignments need to go to Slack!**

Textbooks

- No textbook is required
- Recommendations
  - **Real-Time Rendering, 4th ed. (Akenine-Möller, Haines, Hoffman)**
  - **Fundamentals of Computer Graphics, 3rd ed**. (Shirley, Marschner)
  - **Immersive linear algebra — Recommended!**