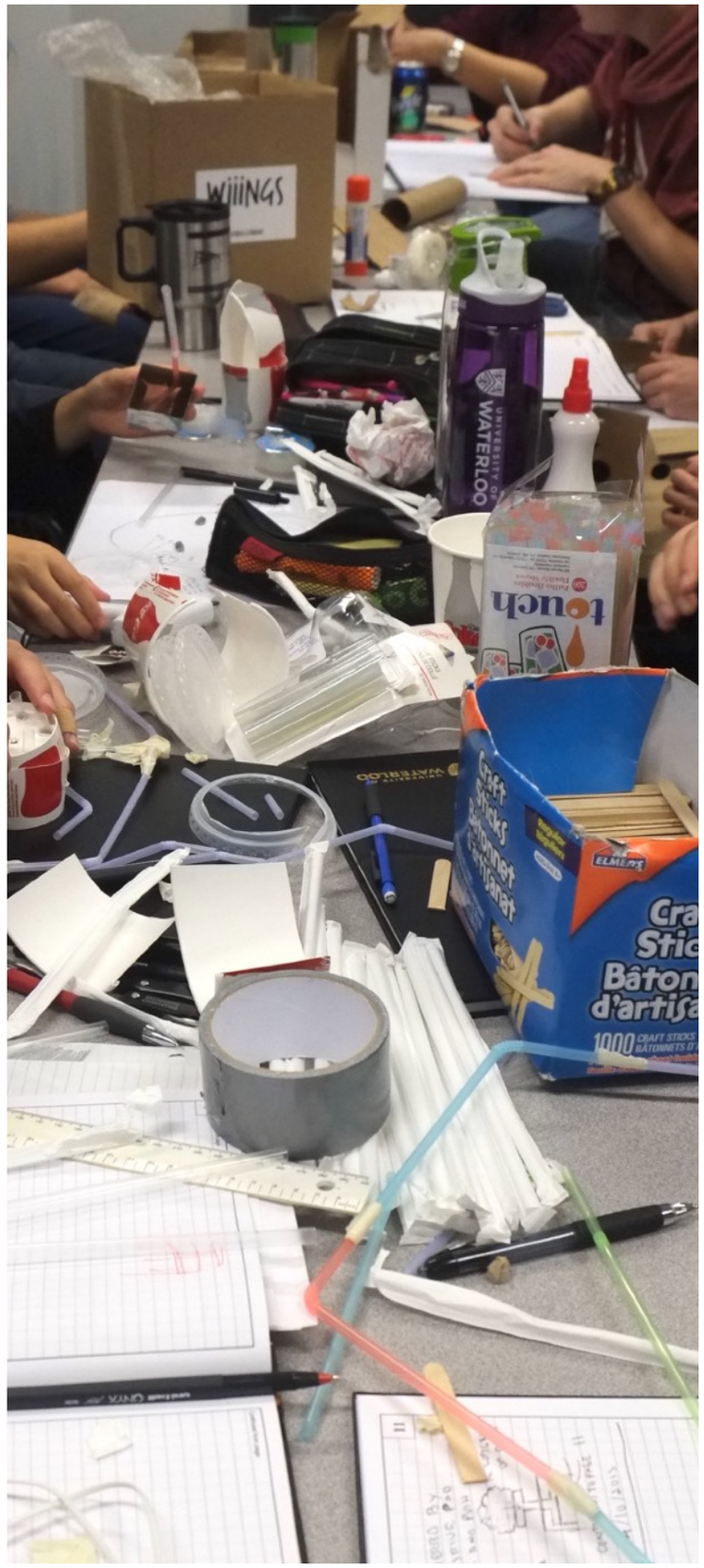
W1

Welcome Back, Teams, Questions

SYDE461

Dr. Matt Borland



What's on for today:

- Capstone project motivation and objectives
- Project expectations and deliverables
- Individual accountability
- Q+A
- the most important thing to remember
- the other most important thing to remember

葉隠

In the Kamigata area, they have a sort of tiered lunchbox they use for a single day when flower viewing. Upon returning, they throw them away, trampling them underfoot. The end is important in all things.

- Yamamoto Tsunetomo, Hagakure

Welcome back!

We will be asynchronous for content, synchronous for support.

Content is already all posted

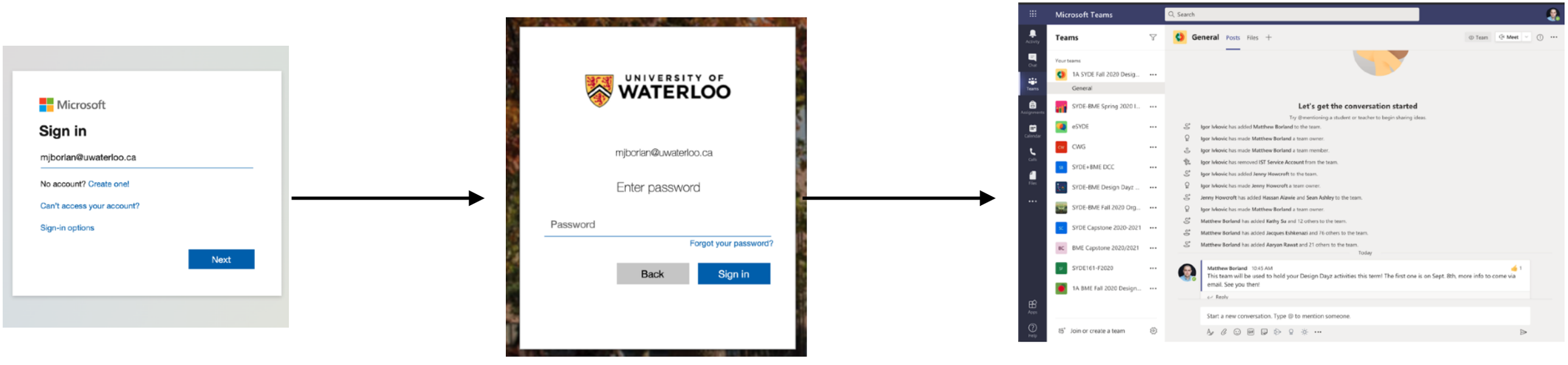
Scheduled support sessions are Fridays 9:30-11:30am. We will be available in E5-6006 at that time.

We will also answer other questions through MS-Teams and be able to meet at other times, we just won't promise specific times for that.

You should have already received an email with a link, but in case you missed it just go to:

https://teams/microsoft.com

...and then log in using your uwaterloo info/email address and password.



There is also a desktop and mobile app you can use instead of the web browser:
https://www.microsoft.com/en-ca/microsoft-365/microsoft-teams/download-app

I am a course coordinator this time.
All I have to do is coordinate.

Everything I do in these sessions is extra stuff I'm doing to help you.
I don't have to do it.

Remember beginner's mind.
Be open, try and think how it might benefit you.

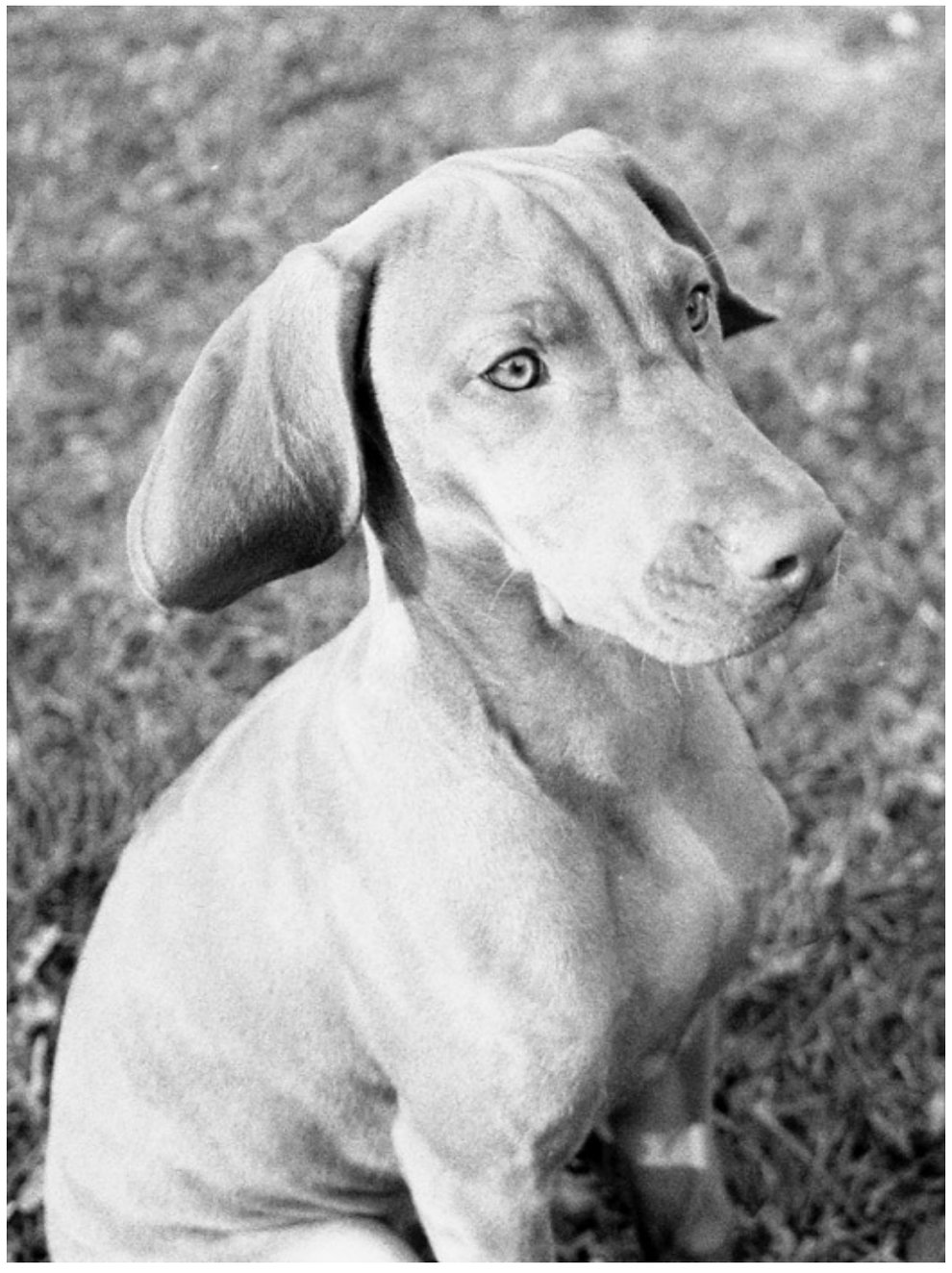
Course Syllabus

Course Schedule

Teams:

- have you got a project?
- need a project?
- need a team?

You're on the Capstone MS-Teams team!



Pippa for President:
"Tummy rubs for all!"

Class Elections

葉隠

It is spiritless to think that you cannot attain to that which you have seen and heard the masters attain. The masters are people. You are also a person. If you think that you will be inferior in doing something, you will be on that road very soon.

- Yamamoto Tsunetomo, Hagakure

(2016). Voices.nationalgeographic.com. Retrieved 8 September 2016, from http://voices.nationalgeographic.com/files/2015/11/KKC6731.jpg

Why do an FYDP?

The CEAB requires all engineering undergraduates complete a ***significant open-ended engineering design project involving teamwork and project management***

SYDE 461/462 Objectives:

- Complete a substantial engineering design project
- Project must demonstrate application of engineering design knowledge and skills gained throughout SYDE program

- All projects are expected to be **substantial projects** at a suitable technical level for 4th year engineering students
- Projects must be completed in a **team of 4 students**
- All projects must include rigorous **needs assessment, design, analysis,** and **validation** activities
- ALL projects must produce a **demonstrable, testable engineering design outcome:**
  - A **functional prototype must be demonstrated/learned from** in 4A
  - **A robust, evaluated, and polished design solution** must be demonstrated in 4B

What we expect from you:

- 2 hours laboratory/design sessions (weekly)
- 7-10 hours design project work per week
- **120 hours/person/term** is expected over the course of the project

Team vs. Individual Project Work

- ALL team members are expected to make a ***substantial technical*** contribution to the project
- Onus is on individual members to prove their contributions:
    - documented on team deliverables and in individual accountability submissions
- Differential grading will be applied if necessary on team deliverables

Project Grading

- Course instructors will grade all project components with input from project advisors and panel examiners
    - Late/missing feedback from supervisors will be excluded from grades. It is group's responsibility to ensure advisors submit feedback by grading deadline
- Course instructors reserve the right to apply ***differential grading*** if there is lack of evidence of contribution from an individual
    - However, group deliverables will still be held to overall expectation standards
    - If team feels lack of effort by 1+ group members is impacting group's ability to meet expectations, they ***MUST inform the course instructor PRIOR to any impacted deliverable submission*** to be considered for accommodation in deliverable grading

Questions?

Engineering Accountability Logs

1. Describe and/or illustrate individual contributions to the team design project: What did **you** do? How do we know ***you*** did it?

• Proof may be in terms of handwritten entries; annotated illustrations or pictures; select emailed communications; etc. To provide a coherent picture of the project, you may need to provide some context of what others on the team have done. CLARIFY, when efforts were collaborative, and when they were your contributions.

2. Comment on individual academic/technical learning from design project task outcomes:

What did ***you*** learn?
• Learning could be interpretation of results; could be better understanding of skill or resource limitations; could be realization that project is not headed in a productive direction – be honest. Honesty is part of professional practice. It is not uncommon to have to explain and own up to why a project has not proceeded as planned. Being accountable and responsible for project decisions are part of professional practice, too.

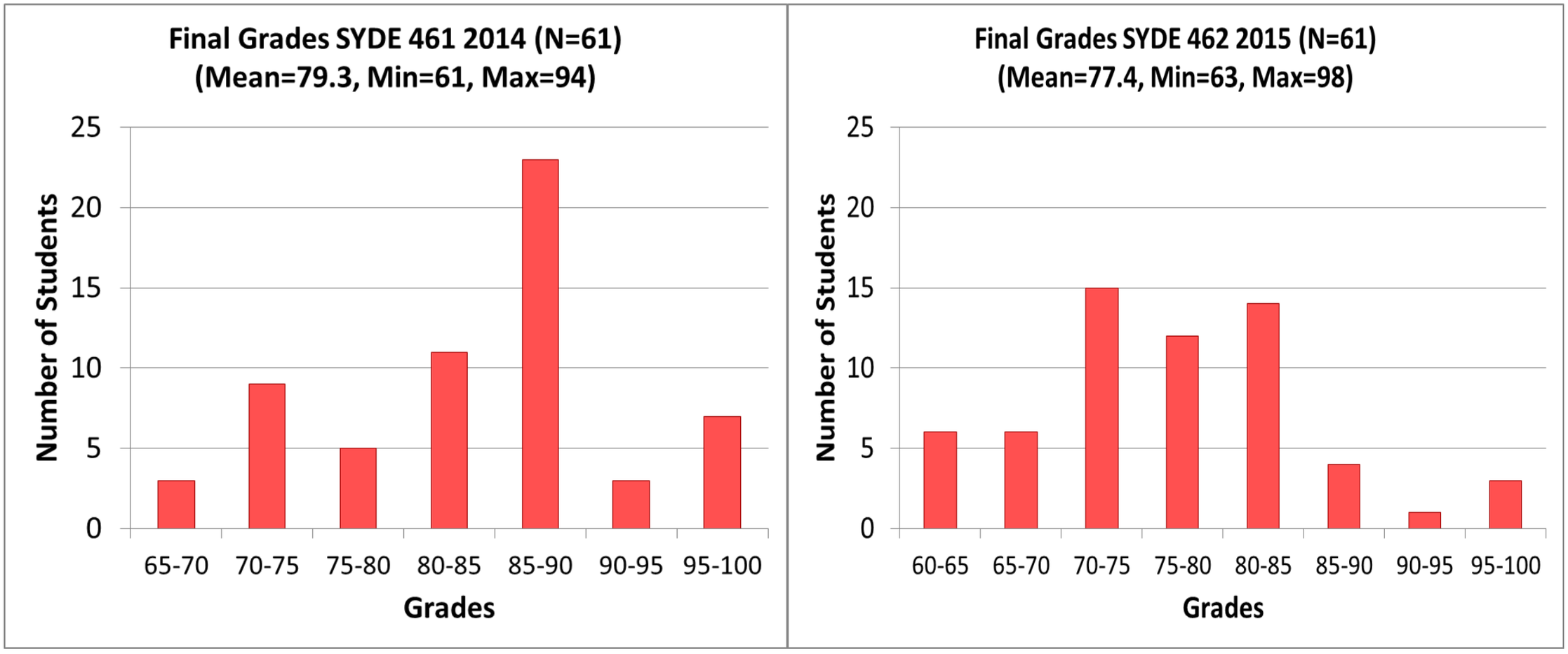
3. Identify and track personal management of assigned project tasks:

What were *you* assigned to do, or take the initiative to do? Did you complete it? If no, why not?

- Be honest. What do you need to do next? Can you reasonably meet new targets, or is project re-scoping needed.

- How does your work fit into the group's overall plan, and how is that plan changing over time? Where is your group trying to go, and how will you get there? How are you individually contributing to achieving that objective?

Performance under current course structure:



2016 - 2 students failed SYDE 462
2017 - 2 students failed SYDE 462, 1 student barely passed
2017 - 1 student failed 461
2018 - 1 student failed 462
2019 - 1 student required a recovery option
2020 - 4 students failed 462

The most important thing to remember:

Building

vs.

Designing

What is the actual problem?

http://solafeet.com/buy.html

http://www.wearbelty.com/

Engineering is Applied Science

We need everyone to apply science at an advanced level in this project.

There are other tasks that aren't engineering that will make your projects…you need to do those, too.

Design teams - email who you are working with to rroufail@uwaterloo.ca and mjborlan@uwaterloo.ca - also include a 1-2 sentence description of your potential problem area! Due tonight!

If you don't have a team yet, email us that, too!

Teams must be finalized by next week…
…or I will finalize them for you!

You've got Q's, we've got A's…