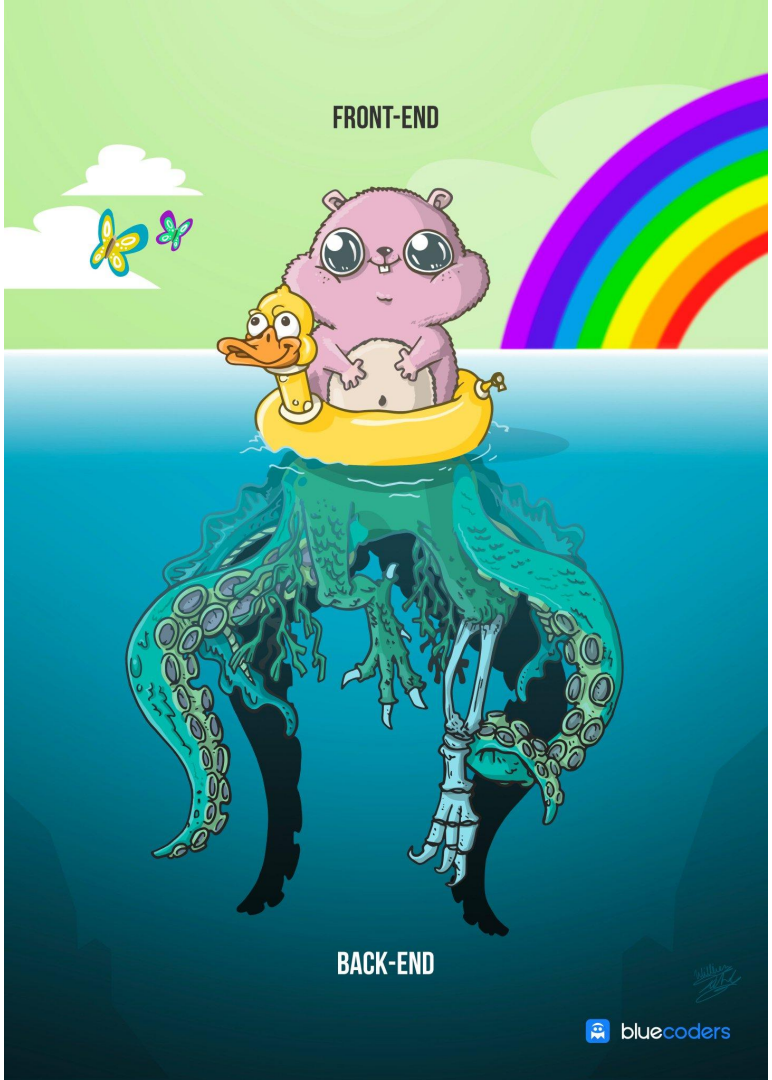
Presentation

Web development I: Front-end engineering


FRONT-END
BACK-END
bluecoders

Current status of the Web

ANTIREZ
@antirez

I look at the web today. Not as a programmer, but as a user of broken sites that are unable to obey the most basic rules of navigation and usability, terribly slow despite the hardware progresses. And I can only think that modern frontend development has failed.

11:06 AM · Apr 3, 2021 · Twitter for Android

Andy Budd
@andybudd

A typical website visit in 2022

1. Figure out how to decline all but essential cookies
2. Close the support widget asking if I need help
3. Stop the auto-playing video
4. Close the “subscribe to our newsletter” pop-up
5. Try and remember why I came here in the first place

2:35 PM · Jan 2, 2022 · Twitter Web App

Learning outcomes

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- Understand the foundations of front-end development
- Identify the key components of web technologies
- Judge and support best practices in web development

What this course is NOT about

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- ✖ Learning some framework or library
- ✖ Acquiring graphic design skills
- ✖ Becoming a usability expert

One promise

By the end of this course you will have become a professional front-end developer.

Course staff

Instructor & course responsible	Prof. Dr. Luis LEIVA (lectures)
Instructor	Mr. Kayhan LATIFZADEH (practicals)
Teaching assistant	Ms. Astley GOMES DO SANTOS (grading)
Student support	Mr. Alexandre TINOUERT
	Mr. Hugo BARTHELEMY
	Mr. Saad SHAKEEL

Workload

ECTS	5
Lectures	21 h
Practicals	31 h
Coding assignments & self study	97 h
Final exam	1 h

Course evaluation

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Coding assignments	50% of the grade: continuous evaluation
Final exam	50% of the grade: multiple-choice quiz, open book*, 30 questions in 1h

*no electronic devices allowed, only one A4 paper sheet printed on both sides

A minimum grade of 4.5 (out of 10) in each part is required to pass the course. Otherwise the final grade will be the minimum grade in each part.

How the final grade is computed

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```
function finalGrade(exam, avgAssignments) {
  // Both `exam` and `avgAssignments` is a grade between 0 and 10.
  if (exam < 4.5 || avgAssignments < 4.5)
    return Math.min(exam, avgAssignments);

  return exam + avgAssignments;
}
```

Note 1: There are 10 coding assignments (subject to bank holidays).

Note 2: The exam has 30 questions with 4 possible answers each (only one is correct).

Course evaluation

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Redoing students

The coding exercises can only be retaken during the next academic year. The final exam can be retaken in the next examination session.

Grades from the coding exercises will be retained until the student passes the course. Grades from the final exam will only be retained for the current course.

A failing student can decide to redo either the coding exercises or the final exam if their grade in that part was low.

Grading stories

Harry submitted some coding assignments and got an average grade of 4.5 (out 10) points. He got 4.5 (out of 10) points in the final exam. He didn't pass the course. *Final grade: 9/20* 👎

Ginny submitted only two coding assignments and got 2 (out 10) points. She did a perfect exam with 10 (out of 10) points, but she didn't pass the course. *Final grade: 2/20* 👎

Hermione submitted all coding assignments and got 9 (out of 10) points. She failed the final exam with 4.5 (out of 10) points, but she passed the course. *Final grade: 13.5/20* 👍

Ron submitted all coding assignments and got 10 (out 10) points. He did a great exam with 9.5 (out of 10) points, so he passed the course with flying colors. Also he was offered a student job. *Final grade: 19.5/20* 👍

Coding assignments

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Every week we will propose a coding exercise

You have one week to solve it

You must submit it *only* via Moodle

No extension deadline allowed

Don’t wait until the last day to work on the exercise

Don’t wait until the last minute to submit

Read the coding assignment description carefully

Always **comment your code**

Coding assignments **disclaimer**

Coding assignments may hurt your feelings

They are conceptually simple BUT:

- They require **reading comprehension**
- They require **strict conventions**
- They require **discipline** and **accountability**

Please submit early and often to Moodle

You can test your assignment before submitting

No fraud or plagiarism allowed

The University expects you to know and observe the rules regarding academic integrity

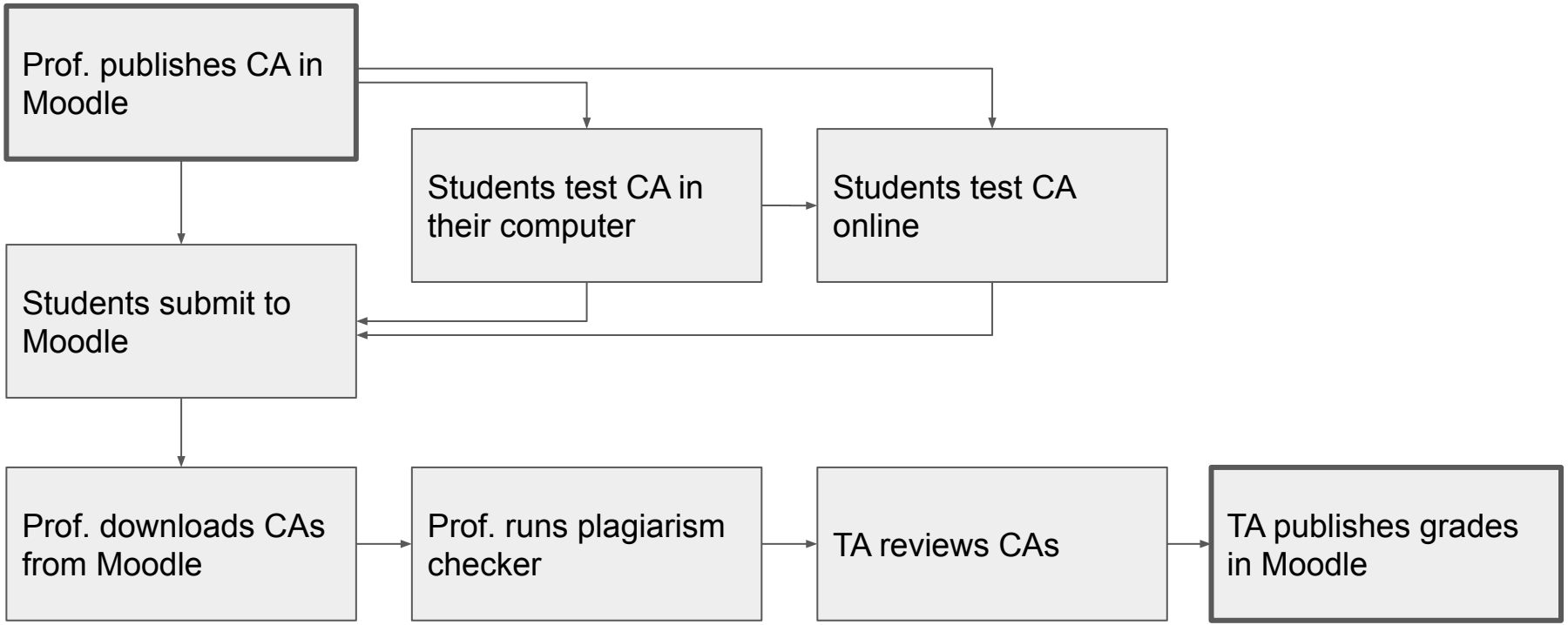
The disciplinary procedure for fraud and plagiarism provides the following definitions:

Fraud or attempted fraud: forms of academic misconduct that intend to falsify the result of an examination or other summative assessment.

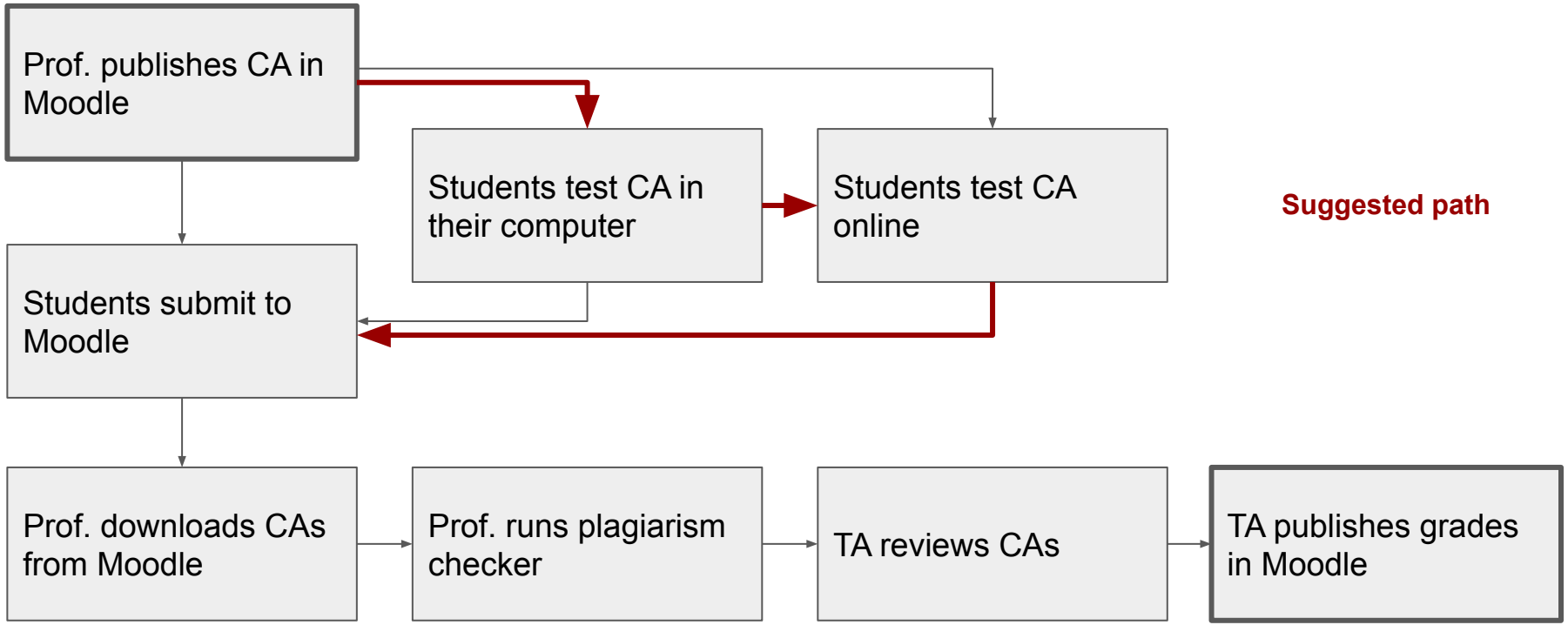
Plagiarism: the act, voluntary or involuntary, of copying another person's work and passing it off as one's own.

Report of misconducts will be elevated to the Study Program Director and the Vice-Rector for Academic Affairs. *Every student involved in a plagiarism case will be reported.* **Any form of plagiarism in any part will be penalized with a grade of 0, so no way to pass the course.**

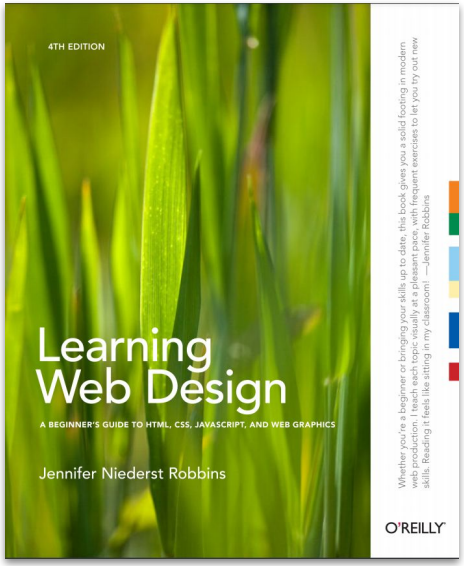
Coding assignments workflow



Coding assignments workflow



Reference textbooks



J. Robbins. **Learning Web Design.** O'Reilly Media, 4th ed.

https://javascript.info

Course topics

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Front-end capabilities

How the web works

Key concepts to know

HTML Overview

Marking up text

Adding links

Adding images

Tables

Forms

HTML5

Cascading Style Sheets

Formatting text

Colors and backgrounds

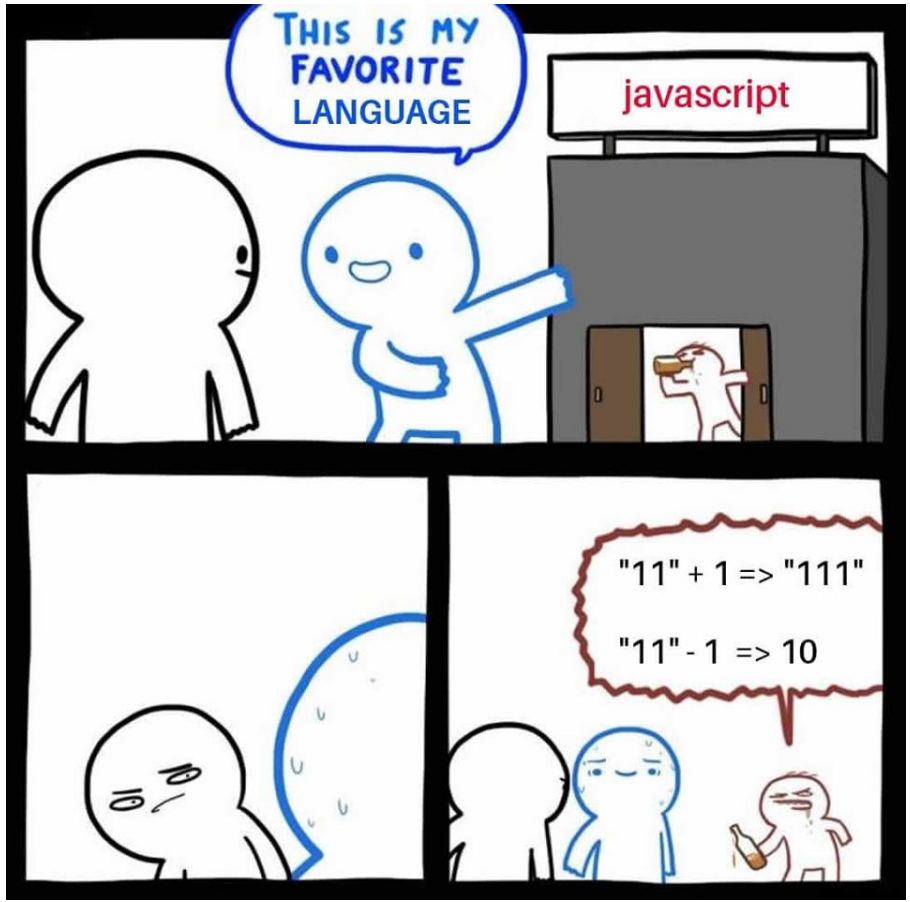
Thinking inside the box

Floating and positioning

Page layout

Transitions, transforms, and animation

CSS techniques


THIS IS MY FAVORITE LANGUAGE
javascript
"11" + 1 => "111"
"11" - 1 => 10

Course schedule

September 2023

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	**19**	20	**21**	22	23
24	25	**26**	27	**28**	29	30

October 2023

Su	Mo	Tu	We	Th	Fr	Sa
1	2	**3**	4	**5**	6	7
8	9	**10**	11	**12**	13	14
15	16	**17**	18	**19**	20	21
22	23	**24**	25	**26**	27	28
29	30	**31**				

November 2023

Su	Mo	Tu	We	Th	Fr	Sa
			1	**2**	3	4
5	6	**7**	8	**9**	10	11
12	13	**14**	15	**16**	17	18
19	20	**21**	22	**23**	24	25
26	27	**28**	29	**30**		

December 2023

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	**5**	6	**7**	8	9
10	11	**12**	13	**14**	15	16
17	18	**19**	20	**21**	22	23
24	25	26	27	28	29	30
31						

Lectures on **Thursdays** and Practicals on **Tuesdays**

Check classroom in your Guichet Etudiant

Learning support

Questions: Use the Moodle forum (preferred) or write us:

luis.leiva@uni.lu | kayhan.latifzadeh@uni.lu

Additional support regarding **practicals** and **coding exercises**:

alexandre.tinouert.001@student.uni.lu | hugo.barthelemy.001@student.uni.lu | saad.shakeel.002@student.uni.lu

Office hours: book an appointment via email

Students' feedback

Students' comments to past selves

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"Work hard, learn and do the assignments."

"Read all the documents and the slides."

"Do not underestimate Javascript."

"Pay more attention to the classes."

"Don't leave assignments to the last minute."

"Spend more time on the homeworks."

"The course is intense learning of frontend tech."

"Trust me, you will love this course."