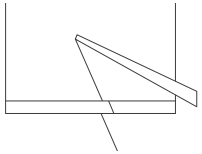
Bring ideas to life
VIA University College



Introduction to ESW 1

Embedded Software

Agenda

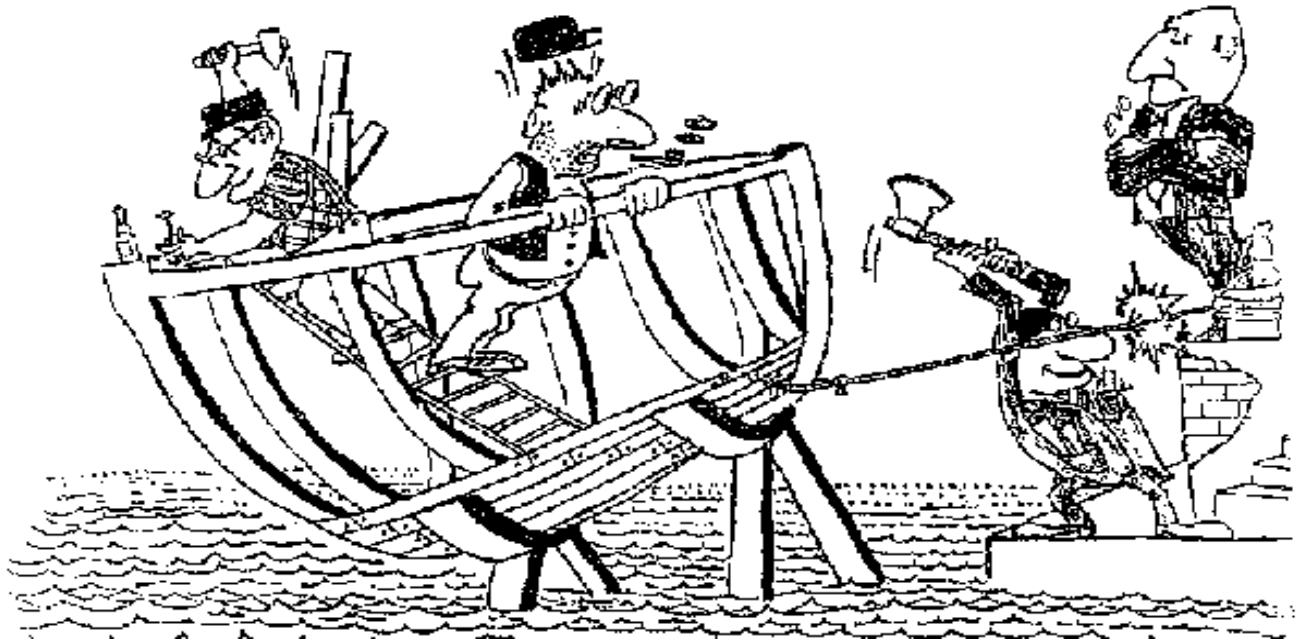
- Some practical things
- Short introduction to ESW 1
- Overall description of the course
- What you can expect from me – and what I expect from you

After this course you can

- Explain basic C programming artefacts and constructs
- Understand Memory Management in C
- Understand basic concepts of Real-time applications (FreeRTOS)
- Use C APIs and libraries for Hardware drivers etc.
- Understand pointers and simple data structures in C
- Understand Test Driven Development (TDD) in C

Consequences

- If you come to late – you miss some of the lesson
  - Wait outside class until next break!
- Exercises delivered to late will not be corrected



Deadline is deadline!

ItsLearning

ItsLearning will be your source to information

- Session Plan
- Session Material
- Exercises
- Notes
- Links
- Hand-ins
- Tests
- Etc.

(hand-in via email will not be accepted!)

Text book

- [**Kernigham, 1998**]: Brian W. Kernighan and Dennis M. Ritchie - The C programming Language.
- Online Tutorials, resources
- Additional notes will be supplied in the ESW1 pages in ItsLearning

Text book references

- [**Kernigham, 1998**]: Brian W. Kernighan and Dennis M. Ritchie - The C programming Language.

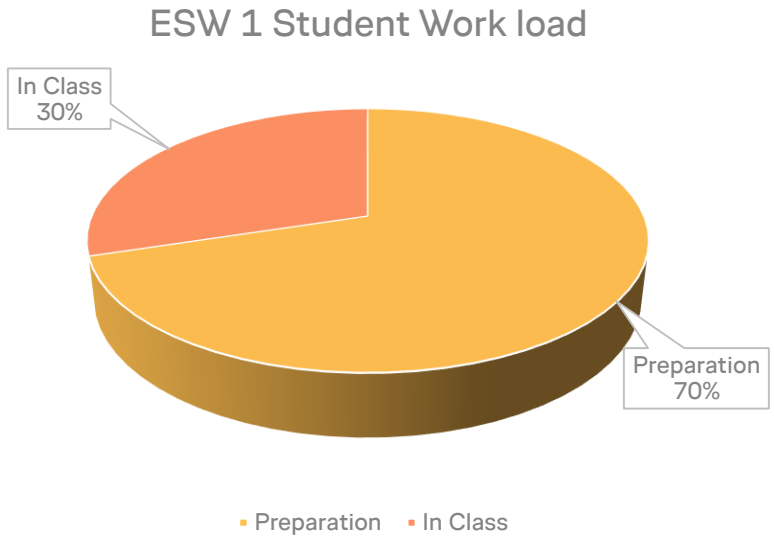
- [Kernigham, 1998]: will be used as reference to the text book

E.g. Plan in ItsLearning:

	Session	Date	Content	Preparation
	1	8. feb 08:20 – 11:50	Introduction to ESW1 Introduction to C-Programming Installation of C-Tools Basic I/O, Tool Chain	Take a look at The History of the C-Language **[Kernighan, 1998]**: "C Programming Language": Introduction + Chapter 1, Chapter 7.1 and Chapter 8.1

Expected workload

- The course counts 5 ETCS point
- One ETCS point = 27.5 hours work
  => total 137.5 hours
- We are in the class 4 lessons per week in 11 weeks (4 * 11 * 45 minutes = 33 hours)



- For preparation/homework: 137.5-33 = **104.5 hours!**

Conclusion:

Preparation/homework: ≈ 9 hours per week!!!!

Software development is learned by practising!

What you can expect from me

- Present and explain relevant and up-to-date material for you
- Show technics to solve problems
- Try my best to answer your questions
- Give you relevant assignments and feedback

What we expect from you?

- Prepare for classes
- Show up in class, and be active during lessons
- Make the assignments – programming is learned by practising!
- Help your fellow students if you can
- Ask when you don't understand things

How to study programming

- The most important thing to do is to practice!!
  - How did you learn to drive a bicycle?
    - Could you have learned it by reading a book or by looking at someone doing it?

Evaluation of the course (From course description)

Internal examination

- Three-hour written exam with marks according to the 7-point grading scale.