COURSE OVERVIEW

Computer Practicum EN - WIS - LES

Lecturer: Niki Hrovatin

About

Implementation:

- semester-long
- 15 weeks
- ECTS evaluation: **6 credits**

Lecturer:

- Niki Hrovatin niki.hrovatin@famnit.upr.si

Assistant:

- none :C

Course objectives

Digital literacy — effective use of computers for academic and professional work

Productivity — create structured documents, spreadsheets & presentations

Data literacy — organize, analyze & visualize data

Computational skills — basic understanding of programming constructs

Automation skills — understand and use computer-controlled systems

Applied digital technologies — use appropriate digital tools in wood science

Brief course description

Microsoft 365 — Word, Excel, PowerPoint

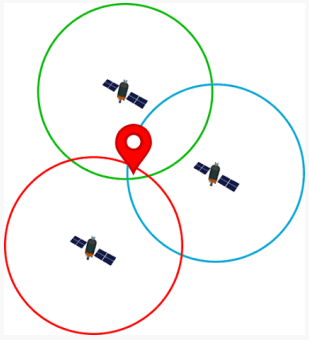
Scientific documents — bibliography & cross-referencing

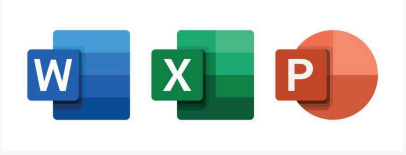
Automation — sensors, actuators & microcontrollers & Python

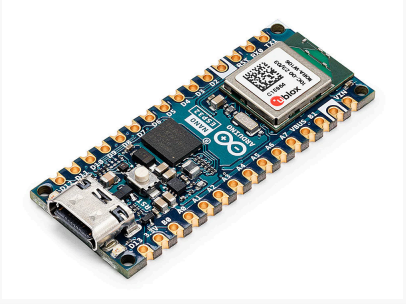
Connectivity — comm protocols & wireless technologies

Spatial technologies — GPS & GIS

Wood science — domain-specific computer tools







```
# This program prints Hello, world!
print('Hello, world!')
```

Required Tools

Laptop / Personal Computer — Required

- Needed for preparing reports and assignments at home.
- **Bring your laptop to lectures and laboratory sessions.**

Microsoft 365 — Desktop Apps
Word, Excel & PowerPoint

- https://www.microsoft.com/en-us/microsoft-365/download-office

Arduino Lab for MicroPython

- https://labs.arduino.cc/en/labs/micropython

Arduino Lab Package Installer

- https://labs.arduino.cc/en/labs/micropython-package-installer

Python

- https://colab.research.google.com/ Ensure that you have a google account (gmail)
- Coding challenge platforms

We love FOSS! *Whenever possible, we prefer **Free and Open Source Software**. Microsoft 365 and Google Colab are the exceptions.*

Grading

The final grade is composed of the following components:

Component	Weight
Project — Report	30%
Project — Presentation	20%
Written Exam	50%
Total	**100%**

All components must individually be **scored at least 50%.**

A passing overall grade does not compensate for a failed component.

Grading - final grade

Sum of weighted grades	Final grade
<50	null
50 - 59	6
60 - 69	7
70 - 79	8
80 - 89	9
90 - 100	10

Additional: oral exam - only in exceptional cases

Project

In pairs

- Work in groups of **2 students**
- Use **one Arduino microcontroller + one sensor**
- Design and perform **2 experiments**
- Prepare **one PowerPoint presentation**
- Present both experiments **together in class**

Individually

- Each student prepares **their own report**
  - presenting one of the experiments
  - following the **reporting guidelines** published in the e-classroom

Project - grading

Report (individual work assessment - report of one experiment): 30%
Document preparation & formatting: 50%
Experimental work, implementation & analysis: 50%

Presentation (group work assessment - present both experiments): 20%
PowerPoint quality: 50%
Presentation quality & demonstrated understanding of the work & QA: 50%

Project - important Dates

Sensor selection & group definition:

- 05.11.2026

Experiment definition:

- 26.11.2026

Project submission:

- 9.1.2027

Project presentation:

- On the last 1 (2) lectures
- 8 minutes per group + 3 min QA

Written exam

- Format:
  - **Practical part — Computer-based**
    - Use Microsoft Excel to:
      - import and organize data
      - perform data analysis
      - create charts and visualizations
  - **Theoretical part — Written questions**
    - Answer questions related to the course topics
    - Answers provided on paper or using a computer
- Dates and registration: ŠIS
- Pay attention to the regulations!!
  - **Registration** at least 5 days before the exam
  - **Cancellation** at least 3 days before the exam

Office hours

- By appointment
- The easiest way to resolve issues (whether with code or other course-related matters) is to ask questions during the break or after the lecture.

Schedule

Lectures: Every Thursday until 21.01.2026 (except holidays – see timetable)

- **Start:** 16:00 PM
- Break: 16:45 – 17:00 PM
- End: 17:45 PM

Lab sessions: Every Friday until 22.01.2026 (except holidays – see timetable)

- **Attendance is mandatory!**
  - Attendance will be recorded.
  - A maximum of **2 absences** is allowed.