Weekly tracking sheets

General Science · 120 weeks · 6 semesters · 1251 h of coursework

Name: _____

Study partner: _____

Start date: ___ / ___ / _____

HOW TO USE

1. **Start of semester:** read the semester overview page and write down your goal.
2. **Sunday evening:** fill in the dates and the goal on the week's sheet.
3. **During the week:** tick each finished task and log your real time every day.
4. **Partner check-in:** explain one idea in 5 minutes without notes.
5. **End of week:** rate your skills; a skill is acquired when you can do it alone.
6. **Weeks 19 and 20:** finish the semester project and sign it off.

THE SIX SEMESTERS

S1 · Refresher and first languages
Year 1 · 192 h

S2 · Calculus, linear algebra and mechanics
Year 1 · 226 h

S3 · Mathematical tools, electromagnetism and general chemistry
Year 2 · 237 h

S4 · Statistics, waves, physical chemistry and physiology
Year 2 · 196 h

S5 · Quantum physics and matter
Year 3 · 198 h

S6 · The universe, quantum chemistry and systems biology
Year 3 · 202 h

S1

YEAR 1 · FOUNDATIONS · 192 H · ≈ 9.6 H PER WEEK

Refresher and first languages

From ___ / ___ to ___ / ___

Consolidate algebra and functions, learn to program in Python, and discover general chemistry and biology.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Algebra: Elementary to Advanced - Equations & Inequalities Algebra: Elementary to Advanced	10 h	W. 1–2	☐
Algebra: Elementary to Advanced - Functions & Applications Algebra: Elementary to Advanced	6 h	W. 2	☐
Algebra: Elementary to Advanced - Polynomials and Roots Algebra: Elementary to Advanced	9 h	W. 2–3	☐
Precalculus: Relations and Functions Precalculus through Data and Modelling	12 h	W. 3–4	☐
Precalculus: Periodic Functions Precalculus through Data and Modelling	9 h	W. 4–5	☐
Precalculus: Mathematical Modeling Precalculus through Data and Modelling	10 h	W. 5–6	☐
Programming for Everybody (Getting Started with Python) Python for Everybody Specialization	17 h	W. 6–8	☐
Python Data Structures Python for Everybody Specialization	20 h	W. 8–10	☐
Using Python to Access Web Data Python for Everybody Specialization	19 h	W. 10–12	☐
Using Databases with Python Python for Everybody Specialization	14 h	W. 12–14	☐
Capstone: Retrieving, Processing, and Visualizing Data with Python Python for Everybody Specialization	9 h	W. 14–15	☐
Introduction to Chemistry: Reactions and Ratios Introduction to Chemistry: Reactions and Ratios	18 h	W. 15–16	☐
Introduction to Chemistry: Structures and Solutions Introduction to Chemistry: Structures and Solutions	17 h	W. 16–18	☐
Biology Everywhere Foundations Biology Everywhere Specialization	5 h	W. 18–19	☐
The Little Stuff: Energy, Cells, and Genetics Biology Everywhere Specialization	6 h	W. 19	☐
The Big Stuff: Evolution and Ecology Biology Everywhere Specialization	4 h	W. 19–20	☐
Specialty Topics: Biology Across Disciplines Biology Everywhere Specialization	7 h	W. 20	☐

TARGET SKILLS

- ☐ Equations, inequalities, functions, polynomials and roots
- ☐ Exponentials, logarithms, trigonometry and modelling
- ☐ Python programming: variables, loops, functions, files, web, SQL
- ☐ Measurement, units, stoichiometry, atomic structure, bonding and solutions
- ☐ Introductory cells, energy, genetics, evolution and ecology

SEMESTER PROJECT

A chemistry calculator in Python: it reads a periodic table from a CSV file, computes molar masses, balances amounts of substance and plans dilutions.

Signed off on ___ / ___ / _____

READING

- ☐ Precalculus 2e
- ☐ Python for Everybody: Exploring Data in Python 3
- ☐ Chemistry 2e

1

YEAR 1 · S1 · WEEK 1/20 · ≈ 9.6 H

Algebra: Elementary to Advanced - Equations & Inequalities

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Algebra: Elementary to Advanced - Equations & Inequalities · start · ≈ 9.6 h
- ☐ Reading: Precalculus 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

2

YEAR 1 · S1 · WEEK 2/20 · ≈ 9.6 H

Algebra: Elementary to Advanced - Equations & Inequalities

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Algebra: Elementary to Advanced - Equations & Inequalities · finish · ≈ 0.4 h
- ☐ Algebra: Elementary to Advanced - Functions & Applications · ≈ 6 h
- ☐ Algebra: Elementary to Advanced - Polynomials and Roots · start · ≈ 3.2 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

3

YEAR 1 · S1 · WEEK 3/20 · ≈ 9.6 H

Algebra: Elementary to Advanced - Polynomials and Roots

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Algebra: Elementary to Advanced - Polynomials and Roots · finish · ≈ 5.8 h
- ☐ Precalculus: Relations and Functions · start · ≈ 3.8 h
- ☐ Reading: Chemistry 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

4

YEAR 1 · S1 · WEEK 4/20 · ≈ 9.6 H

Precalculus: Relations and Functions

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Precalculus: Relations and Functions · finish · ≈ 8.2 h
- ☐ Precalculus: Periodic Functions · start · ≈ 1.4 h
- ☐ Reading: Biology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

5

YEAR 1 · S1 · WEEK 5/20 · ≈ 9.6 H

Precalculus: Periodic Functions

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Precalculus: Periodic Functions · finish · ≈ 7.6 h
- ☐ Precalculus: Mathematical Modeling · start · ≈ 2 h
- ☐ Reading: Precalculus 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

6

YEAR 1 · S1 · WEEK 6/20 · ≈ 9.6 H

Precalculus: Mathematical Modeling

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Precalculus: Mathematical Modeling · finish · ≈ 8 h
- ☐ Programming for Everybody (Getting Started with Python) · start · ≈ 1.6 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

7

YEAR 1 · S1 · WEEK 7/20 · ≈ 9.6 H

Programming for Everybody (Getting Started with Python)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Programming for Everybody (Getting Started with Python) · continued · ≈ 9.6 h
- ☐ Reading: Chemistry 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

8

YEAR 1 · S1 · WEEK 8/20 · ≈ 9.6 H

Programming for Everybody (Getting Started with Python)

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Programming for Everybody (Getting Started with Python) · finish · ≈ 5.8 h
- ☐ Python Data Structures · start · ≈ 3.8 h
- ☐ Reading: Biology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

9

YEAR 1 · S1 · WEEK 9/20 · ≈ 9.6 H

Python Data Structures

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Python Data Structures · continued · ≈ 9.6 h
- ☐ Reading: Precalculus 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

10

YEAR 1 · S1 · WEEK 10/20 · ≈ 9.6 H

Python Data Structures

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Python Data Structures · finish · ≈ 6.6 h
- ☐ Using Python to Access Web Data · start · ≈ 3 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

11

YEAR 1 · S1 · WEEK 11/20 · ≈ 9.6 H

Using Python to Access Web Data

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Python to Access Web Data · continued · ≈ 9.6 h
- ☐ Reading: Chemistry 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

12

YEAR 1 · S1 · WEEK 12/20 · ≈ 9.6 H

Using Python to Access Web Data

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Python to Access Web Data · finish · ≈ 6.4 h
- ☐ Using Databases with Python · start · ≈ 3.2 h
- ☐ Reading: Biology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

13

YEAR 1 · S1 · WEEK 13/20 · ≈ 9.6 H

Using Databases with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Databases with Python · continued · ≈ 9.6 h
- ☐ Reading: Precalculus 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

14

YEAR 1 · S1 · WEEK 14/20 · ≈ 9.6 H

Using Databases with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Using Databases with Python · finish · ≈ 1.2 h
- ☐ Capstone: Retrieving, Processing, and Visualizing Data with Python · start · ≈ 8.4 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

15

YEAR 1 · S1 · WEEK 15/20 · ≈ 9.6 H

Capstone: Retrieving, Processing, and Visualizing Data with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Capstone: Retrieving, Processing, and Visualizing Data with Python · finish · ≈ 0.6 h
- ☐ Introduction to Chemistry: Reactions and Ratios · start · ≈ 9 h
- ☐ Reading: Chemistry 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

16

YEAR 1 · S1 · WEEK 16/20 · ≈ 9.6 H

Introduction to Chemistry: Reactions and Ratios

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Chemistry: Reactions and Ratios · finish · ≈ 9 h
- ☐ Introduction to Chemistry: Structures and Solutions · start · ≈ 0.6 h
- ☐ Reading: Biology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

17

YEAR 1 · S1 · WEEK 17/20 · ≈ 9.6 H

Introduction to Chemistry: Structures and Solutions

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Chemistry: Structures and Solutions · continued · ≈ 9.6 h
- ☐ Reading: Precalculus 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

18

YEAR 1 · S1 · WEEK 18/20 · ≈ 9.6 H

Introduction to Chemistry: Structures and Solutions

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Chemistry: Structures and Solutions · finish · ≈ 6.8 h
- ☐ Biology Everywhere Foundations · start · ≈ 2.8 h
- ☐ Reading: Python for Everybody: Exploring Data in Python 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐
Equations, inequalities, functions, polynomials and roots	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

19

YEAR 1 · S1 · WEEK 19/20 · ≈ 9.6 H

Biology Everywhere Foundations

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Biology Everywhere Foundations · finish · ≈ 2.2 h
- ☐ The Little Stuff: Energy, Cells, and Genetics · ≈ 6 h
- ☐ The Big Stuff: Evolution and Ecology · start · ≈ 1.4 h
- ☐ **Semester project**: A chemistry calculator in Python: it reads a periodic table from a CSV file, computes molar masses, balances amounts of substance and plans dilutions.
- ☐ Reading: Chemistry 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Exponentials, logarithms, trigonometry and modelling	☐	☐	☐	☐
Python programming: variables, loops, functions, files, web, SQL	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

20

YEAR 1 · S1 · WEEK 20/20 · ≈ 9.6 H

The Big Stuff: Evolution and Ecology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ The Big Stuff: Evolution and Ecology · finish · ≈ 2.6 h
- ☐ Specialty Topics: Biology Across Disciplines · ≈ 7 h
- ☐ **Semester project**: A chemistry calculator in Python: it reads a periodic table from a CSV file, computes molar masses, balances amounts of substance and plans dilutions.
- ☐ Reading: Biology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Measurement, units, stoichiometry, atomic structure, bonding and solutions	☐	☐	☐	☐
Introductory cells, energy, genetics, evolution and ecology	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.6 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S2

YEAR 1 · FOUNDATIONS · 226 H · ≈ 11.3 H PER WEEK

Calculus, linear algebra and mechanics

From ___ / ___ to ___ / ___

Master differential and integral calculus and linear algebra, then apply them to Newtonian mechanics; broaden biology to ecology and evolution.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Calculus through Data & Modeling: Precalculus Review Differential Calculus through Data and Modeling	8 h	W. 1	☐
Calculus through Data & Modeling: Limits & Derivatives Differential Calculus through Data and Modeling	10 h	W. 1–2	☐
Calculus through Data & Modeling: Differentiation Rules Differential Calculus through Data and Modeling	8 h	W. 2–3	☐
Calculus through Data & Modeling: Applying Differentiation Differential Calculus through Data and Modeling	7 h	W. 3	☐
Calculus through Data & Modelling: Series and Integration Integral Calculus through Data and Modeling	9 h	W. 3–4	☐
Calculus through Data & Modelling: Techniques of Integration Integral Calculus through Data and Modeling	5 h	W. 4–5	☐
Calculus through Data & Modelling: Integration Applications Integral Calculus through Data and Modeling	6 h	W. 5	☐
Calculus through Data & Modelling: Vector Calculus Integral Calculus through Data and Modeling	5 h	W. 5–6	☐
Linear Algebra: Linear Systems and Matrix Equations Linear Algebra from Elementary to Advanced	10 h	W. 6–7	☐
Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors Linear Algebra from Elementary to Advanced	15 h	W. 7–8	☐
Linear Algebra: Orthogonality and Diagonalization Linear Algebra from Elementary to Advanced	9 h	W. 8–9	☐
Physics 101 - Forces and Kinematics Introduction to Mechanics Specialization	30 h	W. 9–11	☐
Physics 101 - Energy and Momentum Introduction to Mechanics Specialization	23 h	W. 11–13	☐
Physics 101 - Rotational Motion and Gravitation Introduction to Mechanics Specialization	28 h	W. 13–16	☐
Introduction to Biology: Ecology Introduction to Biology: Ecology, Evolution, & Biodiversity	18 h	W. 16–17	☐
Introduction to Biology: Evolution Introduction to Biology: Ecology, Evolution, & Biodiversity	12 h	W. 17–18	☐
Introduction to Biology: Biodiversity Introduction to Biology: Ecology, Evolution, & Biodiversity	23 h	W. 18–20	☐

TARGET SKILLS

- ☐ Limits, derivatives, differentiation rules and optimisation
- ☐ Integrals, series, integration techniques, introduction to vector calculus
- ☐ Linear systems, matrices, determinants, eigenvalues, orthogonality
- ☐ Kinematics, forces, energy, momentum, rotation and gravitation
- ☐ Ecology, evolution and biodiversity

SEMESTER PROJECT

Simulate in Python the trajectory of a projectile with air drag using Euler's method, compare it with the drag-free solution and plot both curves.

Signed off on ___ / ___ / _____

READING

- ☐ Calculus, Volume 1 and Volume 2
- ☐ Linear Algebra
- ☐ University Physics, Volume 1

21

YEAR 1 · S2 · WEEK 1/20 · ≈ 11.3 H

Calculus through Data & Modeling: Precalculus Review

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus through Data & Modeling: Precalculus Review · ≈ 8 h
- ☐ Calculus through Data & Modeling: Limits & Derivatives · start · ≈ 3.3 h
- ☐ Reading: Calculus, Volume 1 and Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

22

YEAR 1 · S2 · WEEK 2/20 · ≈ 11.3 H

Calculus through Data & Modeling: Limits & Derivatives

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus through Data & Modeling: Limits & Derivatives · finish · ≈ 6.7 h
- ☐ Calculus through Data & Modeling: Differentiation Rules · start · ≈ 4.6 h
- ☐ Reading: Linear Algebra

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

23

YEAR 1 · S2 · WEEK 3/20 · ≈ 11.3 H

Calculus through Data & Modeling: Differentiation Rules

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus through Data & Modeling: Differentiation Rules · finish · ≈ 3.4 h
- ☐ Calculus through Data & Modeling: Applying Differentiation · ≈ 7 h
- ☐ Calculus through Data & Modelling: Series and Integration · start · ≈ 0.9 h
- ☐ Reading: University Physics, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Ecology, evolution and biodiversity	☐	☐	☐	☐
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

24

YEAR 1 · S2 · WEEK 4/20 · ≈ 11.3 H

Calculus through Data & Modelling: Series and Integration

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus through Data & Modelling: Series and Integration · finish · ≈ 8.1 h
- ☐ Calculus through Data & Modelling: Techniques of Integration · start · ≈ 3.2 h
- ☐ Reading: The Feynman Lectures on Physics, Volume I

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

25

YEAR 1 · S2 · WEEK 5/20 · ≈ 11.3 H

Calculus through Data & Modelling: Techniques of Integration

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus through Data & Modelling: Techniques of Integration · finish · ≈ 1.8 h
- ☐ Calculus through Data & Modelling: Integration Applications · ≈ 6 h
- ☐ Calculus through Data & Modelling: Vector Calculus · start · ≈ 3.5 h
- ☐ Reading: Calculus, Volume 1 and Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐
Ecology, evolution and biodiversity	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

26

YEAR 1 · S2 · WEEK 6/20 · ≈ 11.3 H

Calculus through Data & Modelling: Vector Calculus

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Calculus through Data & Modelling: Vector Calculus · finish · ≈ 1.5 h
- ☐ Linear Algebra: Linear Systems and Matrix Equations · start · ≈ 9.8 h
- ☐ Reading: Linear Algebra

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

27

YEAR 1 · S2 · WEEK 7/20 · ≈ 11.3 H

Linear Algebra: Linear Systems and Matrix Equations

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Linear Algebra: Linear Systems and Matrix Equations · finish · ≈ 0.2 h
- ☐ Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors · start · ≈ 11.1 h
- ☐ Reading: University Physics, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

28

YEAR 1 · S2 · WEEK 8/20 · ≈ 11.3 H

Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors · finish · ≈ 3.9 h
- ☐ Linear Algebra: Orthogonality and Diagonalization · start · ≈ 7.4 h
- ☐ Reading: The Feynman Lectures on Physics, Volume I

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Ecology, evolution and biodiversity	☐	☐	☐	☐
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

29

YEAR 1 · S2 · WEEK 9/20 · ≈ 11.3 H

Linear Algebra: Orthogonality and Diagonalization

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Linear Algebra: Orthogonality and Diagonalization · finish · ≈ 1.6 h
- ☐ Physics 101 - Forces and Kinematics · start · ≈ 9.7 h
- ☐ Reading: Calculus, Volume 1 and Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

30

YEAR 1 · S2 · WEEK 10/20 · ≈ 11.3 H

Physics 101 - Forces and Kinematics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Forces and Kinematics · continued · ≈ 11.3 h
- ☐ Reading: Linear Algebra

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐
Ecology, evolution and biodiversity	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

31

YEAR 1 · S2 · WEEK 11/20 · ≈ 11.3 H

Physics 101 - Forces and Kinematics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Forces and Kinematics · finish · ≈ 9 h
- ☐ Physics 101 - Energy and Momentum · start · ≈ 2.3 h
- ☐ Reading: University Physics, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

32

YEAR 1 · S2 · WEEK 12/20 · ≈ 11.3 H

Physics 101 - Energy and Momentum

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Energy and Momentum · continued · ≈ 11.3 h
- ☐ Reading: The Feynman Lectures on Physics, Volume I

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

33

YEAR 1 · S2 · WEEK 13/20 · ≈ 11.3 H

Physics 101 - Energy and Momentum

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Energy and Momentum · finish · ≈ 9.4 h
- ☐ Physics 101 - Rotational Motion and Gravitation · start · ≈ 1.9 h
- ☐ Reading: Calculus, Volume 1 and Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Ecology, evolution and biodiversity	☐	☐	☐	☐
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

34

YEAR 1 · S2 · WEEK 14/20 · ≈ 11.3 H

Physics 101 - Rotational Motion and Gravitation

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Rotational Motion and Gravitation · continued · ≈ 11.3 h
- ☐ Reading: Linear Algebra

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

35

YEAR 1 · S2 · WEEK 15/20 · ≈ 11.3 H

Physics 101 - Rotational Motion and Gravitation

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Rotational Motion and Gravitation · continued · ≈ 11.3 h
- ☐ Reading: University Physics, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐
Ecology, evolution and biodiversity	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

36

YEAR 1 · S2 · WEEK 16/20 · ≈ 11.3 H

Physics 101 - Rotational Motion and Gravitation

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 101 - Rotational Motion and Gravitation · finish · ≈ 3.5 h
- ☐ Introduction to Biology: Ecology · start · ≈ 7.8 h
- ☐ Reading: The Feynman Lectures on Physics, Volume I

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

37

YEAR 1 · S2 · WEEK 17/20 · ≈ 11.3 H

Introduction to Biology: Ecology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Biology: Ecology · finish · ≈ 10.2 h
- ☐ Introduction to Biology: Evolution · start · ≈ 1.1 h
- ☐ Reading: Calculus, Volume 1 and Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

38

YEAR 1 · S2 · WEEK 18/20 · ≈ 11.3 H

Introduction to Biology: Evolution

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Biology: Evolution · finish · ≈ 10.9 h
- ☐ Introduction to Biology: Biodiversity · start · ≈ 0.4 h
- ☐ Reading: Linear Algebra

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Ecology, evolution and biodiversity	☐	☐	☐	☐
Limits, derivatives, differentiation rules and optimisation	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

39

YEAR 1 · S2 · WEEK 19/20 · ≈ 11.3 H

Introduction to Biology: Biodiversity

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Biology: Biodiversity · continued · ≈ 11.3 h
- ☐ **Semester project**: Simulate in Python the trajectory of a projectile with air drag using Euler's method, compare it with the drag-free solution and plot both curves.
- ☐ Reading: University Physics, Volume 1

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Integrals, series, integration techniques, introduction to vector calculus	☐	☐	☐	☐
Linear systems, matrices, determinants, eigenvalues, orthogonality	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

40

YEAR 1 · S2 · WEEK 20/20 · ≈ 11.3 H

Introduction to Biology: Biodiversity

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Biology: Biodiversity · finish · ≈ 11.3 h
- ☐ **Semester project**: Simulate in Python the trajectory of a projectile with air drag using Euler's method, compare it with the drag-free solution and plot both curves.
- ☐ Reading: The Feynman Lectures on Physics, Volume I

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Kinematics, forces, energy, momentum, rotation and gravitation	☐	☐	☐	☐
Ecology, evolution and biodiversity	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.3 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S3

YEAR 2 · CORE SCIENCES · 237 H · ≈ 11.8 H PER WEEK

Mathematical tools, electromagnetism and general chemistry

From ___ / ___ to ___ / ___

Acquire differential equations, vector calculus and numerical methods, then apply them to electricity and magnetism; deepen general chemistry.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Matrix Algebra for Engineers Mathematics for Engineers	20 h	W. 1–2	☐
Differential Equations for Engineers Mathematics for Engineers	27 h	W. 2–4	☐
Vector Calculus for Engineers Mathematics for Engineers	30 h	W. 4–7	☐
Numerical Methods for Engineers Mathematics for Engineers	40 h	W. 7–10	☐
Mathematics for Engineers: The Capstone Course Mathematics for Engineers	10 h	W. 10–11	☐
Physics 102 - Electric Charges and Fields Introduction to Electricity and Magnetism Specialization	22 h	W. 11–13	☐
Physics 102 - Electric Potential and DC Circuits Introduction to Electricity and Magnetism Specialization	22 h	W. 13–15	☐
Physics 102 - Magnetic Fields and Faraday's Law Introduction to Electricity and Magnetism Specialization	26 h	W. 15–17	☐
Physics 102 - AC Circuits and Maxwell's Equations Introduction to Electricity and Magnetism Specialization	18 h	W. 17–19	☐
General Chemistry: Concept Development and Application General Chemistry: Concept Development and Application	22 h	W. 19–20	☐

TARGET SKILLS

- ☐ Matrix algebra and differential equations
- ☐ Vector calculus: gradient, divergence, curl, integral theorems
- ☐ Numerical methods and scientific programming in MATLAB
- ☐ Electric fields, potential, circuits, magnetism, induction and Maxwell's equations
- ☐ Thermochemistry, equilibria, kinetics and bonding models

SEMESTER PROJECT

The Mathematics for Engineers capstone: numerical computation of the flow past a cylinder (Kármán vortex street).

Signed off on ___ / ___ / _____

READING

- ☐ Notes on Diffy Qs: Differential Equations for Engineers
- ☐ Calculus, Volume 3
- ☐ University Physics, Volume 2
- ☐ The Feynman Lectures on Physics, Volume II

MY GOAL FOR THIS SEMESTER

41

YEAR 2 · S3 · WEEK 1/20 · ≈ 11.8 H

Matrix Algebra for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Matrix Algebra for Engineers · start · ≈ 11.8 h
- ☐ Reading: Notes on Diffy Qs: Differential Equations for Engineers

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Matrix algebra and differential equations	☐	☐	☐	☐
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

42

YEAR 2 · S3 · WEEK 2/20 · ≈ 11.8 H

Matrix Algebra for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Matrix Algebra for Engineers · finish · ≈ 8.2 h
- ☐ Differential Equations for Engineers · start · ≈ 3.7 h
- ☐ Reading: Calculus, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

43

YEAR 2 · S3 · WEEK 3/20 · ≈ 11.8 H

Differential Equations for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Differential Equations for Engineers · continued · ≈ 11.8 h
- ☐ Reading: University Physics, Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐
Matrix algebra and differential equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

44

YEAR 2 · S3 · WEEK 4/20 · ≈ 11.8 H

Differential Equations for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Differential Equations for Engineers · finish · ≈ 11.5 h
- ☐ Vector Calculus for Engineers · start · ≈ 0.4 h
- ☐ Reading: The Feynman Lectures on Physics, Volume II

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

45

YEAR 2 · S3 · WEEK 5/20 · ≈ 11.8 H

Vector Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Vector Calculus for Engineers · continued · ≈ 11.9 h
- ☐ Reading: Notes on Diffy Qs: Differential Equations for Engineers

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

46

YEAR 2 · S3 · WEEK 6/20 · ≈ 11.8 H

Vector Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Vector Calculus for Engineers · continued · ≈ 11.8 h
- ☐ Reading: Calculus, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Matrix algebra and differential equations	☐	☐	☐	☐
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

47

YEAR 2 · S3 · WEEK 7/20 · ≈ 11.8 H

Vector Calculus for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Vector Calculus for Engineers · finish · ≈ 5.9 h
- ☐ Numerical Methods for Engineers · start · ≈ 6 h
- ☐ Reading: University Physics, Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

48

YEAR 2 · S3 · WEEK 8/20 · ≈ 11.8 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · continued · ≈ 11.8 h
- ☐ Reading: The Feynman Lectures on Physics, Volume II

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐
Matrix algebra and differential equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

49

YEAR 2 · S3 · WEEK 9/20 · ≈ 11.8 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · continued · ≈ 11.8 h
- ☐ Reading: Notes on Diffy Qs: Differential Equations for Engineers

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

50

YEAR 2 · S3 · WEEK 10/20 · ≈ 11.8 H

Numerical Methods for Engineers

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Numerical Methods for Engineers · finish · ≈ 10.4 h
- ☐ Mathematics for Engineers: The Capstone Course · start · ≈ 1.5 h
- ☐ Reading: Calculus, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

51

YEAR 2 · S3 · WEEK 11/20 · ≈ 11.8 H

Mathematics for Engineers: The Capstone Course

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Mathematics for Engineers: The Capstone Course · finish · ≈ 8.5 h
- ☐ Physics 102 - Electric Charges and Fields · start · ≈ 3.3 h
- ☐ Reading: University Physics, Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Matrix algebra and differential equations	☐	☐	☐	☐
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

52

YEAR 2 · S3 · WEEK 12/20 · ≈ 11.8 H

Physics 102 - Electric Charges and Fields

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - Electric Charges and Fields · continued · ≈ 11.8 h
- ☐ Reading: The Feynman Lectures on Physics, Volume II

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

53

YEAR 2 · S3 · WEEK 13/20 · ≈ 11.8 H

Physics 102 - Electric Charges and Fields

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - Electric Charges and Fields · finish · ≈ 6.8 h
- ☐ Physics 102 - Electric Potential and DC Circuits · start · ≈ 5 h
- ☐ Reading: Notes on Diffy Qs: Differential Equations for Engineers

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐
Matrix algebra and differential equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

54

YEAR 2 · S3 · WEEK 14/20 · ≈ 11.8 H

Physics 102 - Electric Potential and DC Circuits

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - Electric Potential and DC Circuits · continued · ≈ 11.9 h
- ☐ Reading: Calculus, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

55

YEAR 2 · S3 · WEEK 15/20 · ≈ 11.8 H

Physics 102 - Electric Potential and DC Circuits

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - Electric Potential and DC Circuits · finish · ≈ 5.1 h
- ☐ Physics 102 - Magnetic Fields and Faraday's Law · start · ≈ 6.8 h
- ☐ Reading: University Physics, Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

56

YEAR 2 · S3 · WEEK 16/20 · ≈ 11.8 H

Physics 102 - Magnetic Fields and Faraday's Law

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - Magnetic Fields and Faraday's Law · continued · ≈ 11.8 h
- ☐ Reading: The Feynman Lectures on Physics, Volume II

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Matrix algebra and differential equations	☐	☐	☐	☐
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

57

YEAR 2 · S3 · WEEK 17/20 · ≈ 11.8 H

Physics 102 - Magnetic Fields and Faraday's Law

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - Magnetic Fields and Faraday's Law · finish · ≈ 7.4 h
- ☐ Physics 102 - AC Circuits and Maxwell's Equations · start · ≈ 4.4 h
- ☐ Reading: Notes on Diffy Qs: Differential Equations for Engineers

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

58

YEAR 2 · S3 · WEEK 18/20 · ≈ 11.8 H

Physics 102 - AC Circuits and Maxwell's Equations

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - AC Circuits and Maxwell's Equations · continued · ≈ 11.8 h
- ☐ Reading: Calculus, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐
Matrix algebra and differential equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

59

YEAR 2 · S3 · WEEK 19/20 · ≈ 11.8 H

Physics 102 - AC Circuits and Maxwell's Equations

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics 102 - AC Circuits and Maxwell's Equations · finish · ≈ 1.7 h
- ☐ General Chemistry: Concept Development and Application · start · ≈ 10.2 h
- ☐ **Semester project**: The Mathematics for Engineers capstone: numerical computation of the flow past a cylinder (Kármán vortex street).
- ☐ Reading: University Physics, Volume 2

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Vector calculus: gradient, divergence, curl, integral theorems	☐	☐	☐	☐
Numerical methods and scientific programming in MATLAB	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

60

YEAR 2 · S3 · WEEK 20/20 · ≈ 11.8 H

General Chemistry: Concept Development and Application

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ General Chemistry: Concept Development and Application · finish · ≈ 11.8 h
- ☐ **Semester project**: The Mathematics for Engineers capstone: numerical computation of the flow past a cylinder (Kármán vortex street).
- ☐ Reading: The Feynman Lectures on Physics, Volume II

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Electric fields, potential, circuits, magnetism, induction and Maxwell's equations	☐	☐	☐	☐
Thermochemistry, equilibria, kinetics and bonding models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 11.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S4

YEAR 2 · CORE SCIENCES · 196 H · ≈ 9.8 H PER WEEK

Statistics, waves, physical chemistry and physiology

From ___ / ___ to ___ / ___

Learn to analyse experimental data, study waves and optics, enter physical chemistry and spectroscopy, and connect biology with chemistry.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Understanding and Visualizing Data with Python Statistics with Python	20 h	W. 1–3	☐
Inferential Statistical Analysis with Python Statistics with Python	22 h	W. 3–5	☐
Fitting Statistical Models to Data with Python Statistics with Python	15 h	W. 5–6	☐
Physics of Oscillators and Waves Physics of Waves and Optics Specialization	20 h	W. 6–8	☐
Physics of Light and Materials Physics of Waves and Optics Specialization	17 h	W. 8–10	☐
Physics of Geometrical and Physical Optics Physics of Waves and Optics Specialization	20 h	W. 10–12	☐
Introduction to Physical Chemistry Introduction to Physical Chemistry	19 h	W. 12–14	☐
Introduction to Molecular Spectroscopy Introduction to Molecular Spectroscopy	12 h	W. 14–15	☐
Anatomy & Physiology: Levels of Organization Human Anatomy & Physiology I Specialization	10 h	W. 15–16	☐
Anatomy & Physiology: Support & Movement Human Anatomy & Physiology I Specialization	12 h	W. 16–18	☐
Anatomy & Physiology: Regulation, Integration, & Control Human Anatomy & Physiology I Specialization	9 h	W. 18	☐
Chemical Biology Chemical Biology	20 h	W. 18–20	☐

TARGET SKILLS

- ☐ Descriptive statistics, inference, confidence intervals, regression in Python
- ☐ Oscillators, waves, light and materials, geometrical and physical optics
- ☐ Gases, thermodynamics and kinetics in physical chemistry
- ☐ Molecular spectroscopy: infrared, UV-visible, reading spectra
- ☐ Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems
- ☐ Chemical biology: small molecules, proteins and biochemical assays

SEMESTER PROJECT

A statistical study in Python on real laboratory data (spectra or physiological measurements): description, confidence intervals, regression and a two-page report.

Signed off on ___ / ___ / _____

READING

- ☐ OpenIntro Statistics
- ☐ University Physics, Volume 3
- ☐ Anatomy and Physiology 2e

MY GOAL FOR THIS SEMESTER

61

YEAR 2 · S4 · WEEK 1/20 · ≈ 9.8 H

Understanding and Visualizing Data with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Understanding and Visualizing Data with Python · start · ≈ 9.8 h
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

62

YEAR 2 · S4 · WEEK 2/20 · ≈ 9.8 H

Understanding and Visualizing Data with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Understanding and Visualizing Data with Python · continued · ≈ 9.8 h
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

63

YEAR 2 · S4 · WEEK 3/20 · ≈ 9.8 H

Understanding and Visualizing Data with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Understanding and Visualizing Data with Python · finish · ≈ 0.4 h
- ☐ Inferential Statistical Analysis with Python · start · ≈ 9.4 h
- ☐ Reading: Anatomy and Physiology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems	☐	☐	☐	☐
Chemical biology: small molecules, proteins and biochemical assays	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

64

YEAR 2 · S4 · WEEK 4/20 · ≈ 9.8 H

Inferential Statistical Analysis with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Inferential Statistical Analysis with Python · continued · ≈ 9.8 h
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

65

YEAR 2 · S4 · WEEK 5/20 · ≈ 9.8 H

Inferential Statistical Analysis with Python

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Inferential Statistical Analysis with Python · finish · ≈ 2.8 h
- ☐ Fitting Statistical Models to Data with Python · start · ≈ 7 h
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

66 Fitting Statistical Models to Data with Python

YEAR 2 · S4 · WEEK 6/20 · ≈ 9.8 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Fitting Statistical Models to Data with Python · finish · ≈ 8 h
- ☐ Physics of Oscillators and Waves · start · ≈ 1.8 h
- ☐ Reading: Anatomy and Physiology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems	☐	☐	☐	☐
Chemical biology: small molecules, proteins and biochemical assays	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

67

YEAR 2 · S4 · WEEK 7/20 · ≈ 9.8 H

Physics of Oscillators and Waves

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics of Oscillators and Waves · continued · ≈ 9.8 h
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

68

YEAR 2 · S4 · WEEK 8/20 · ≈ 9.8 H

Physics of Oscillators and Waves

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics of Oscillators and Waves · finish · ≈ 8.4 h
- ☐ Physics of Light and Materials · start · ≈ 1.4 h
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

69

YEAR 2 · S4 · WEEK 9/20 · ≈ 9.8 H

Physics of Light and Materials

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics of Light and Materials · continued · ≈ 9.8 h
- ☐ Reading: Anatomy and Physiology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems	☐	☐	☐	☐
Chemical biology: small molecules, proteins and biochemical assays	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

70

YEAR 2 · S4 · WEEK 10/20 · ≈ 9.8 H

Physics of Light and Materials

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics of Light and Materials · finish · ≈ 5.8 h
- ☐ Physics of Geometrical and Physical Optics · start · ≈ 4 h
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

71

YEAR 2 · S4 · WEEK 11/20 · ≈ 9.8 H

Physics of Geometrical and Physical Optics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics of Geometrical and Physical Optics · continued · ≈ 9.8 h
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

72

YEAR 2 · S4 · WEEK 12/20 · ≈ 9.8 H

Physics of Geometrical and Physical Optics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Physics of Geometrical and Physical Optics · finish · ≈ 6.2 h
- ☐ Introduction to Physical Chemistry · start · ≈ 3.6 h
- ☐ Reading: Anatomy and Physiology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems	☐	☐	☐	☐
Chemical biology: small molecules, proteins and biochemical assays	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

73

YEAR 2 · S4 · WEEK 13/20 · ≈ 9.8 H

Introduction to Physical Chemistry

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Physical Chemistry · continued · ≈ 9.8 h
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

74

YEAR 2 · S4 · WEEK 14/20 · ≈ 9.8 H

Introduction to Physical Chemistry

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Physical Chemistry · finish · ≈ 5.6 h
- ☐ Introduction to Molecular Spectroscopy · start · ≈ 4.2 h
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

75

YEAR 2 · S4 · WEEK 15/20 · ≈ 9.8 H

Introduction to Molecular Spectroscopy

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Molecular Spectroscopy · finish · ≈ 7.8 h
- ☐ Anatomy & Physiology: Levels of Organization · start · ≈ 2 h
- ☐ Reading: Anatomy and Physiology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems	☐	☐	☐	☐
Chemical biology: small molecules, proteins and biochemical assays	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

76

YEAR 2 · S4 · WEEK 16/20 · ≈ 9.8 H

Anatomy & Physiology: Levels of Organization

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Anatomy & Physiology: Levels of Organization · finish · ≈ 8 h
- ☐ Anatomy & Physiology: Support & Movement · start · ≈ 1.8 h
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

77

YEAR 2 · S4 · WEEK 17/20 · ≈ 9.8 H

Anatomy & Physiology: Support & Movement

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Anatomy & Physiology: Support & Movement · continued · ≈ 9.8 h
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

78

YEAR 2 · S4 · WEEK 18/20 · ≈ 9.8 H

Anatomy & Physiology: Support & Movement

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Anatomy & Physiology: Support & Movement · finish · ≈ 0.4 h
- ☐ Anatomy & Physiology: Regulation, Integration, & Control · ≈ 9 h
- ☐ Chemical Biology · start · ≈ 0.4 h
- ☐ Reading: Anatomy and Physiology 2e

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Organisation of the human body, tissues, skeleton, muscles, nervous and endocrine systems	☐	☐	☐	☐
Chemical biology: small molecules, proteins and biochemical assays	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

79

YEAR 2 · S4 · WEEK 19/20 · ≈ 9.8 H

Chemical Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Chemical Biology · continued · ≈ 9.8 h
- ☐ **Semester project**: A statistical study in Python on real laboratory data (spectra or physiological measurements): description, confidence intervals, regression and a two-page report.
- ☐ Reading: OpenIntro Statistics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Descriptive statistics, inference, confidence intervals, regression in Python	☐	☐	☐	☐
Oscillators, waves, light and materials, geometrical and physical optics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

80

YEAR 2 · S4 · WEEK 20/20 · ≈ 9.8 H

Chemical Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Chemical Biology · finish · ≈ 9.8 h
- ☐ **Semester project**: A statistical study in Python on real laboratory data (spectra or physiological measurements): description, confidence intervals, regression and a two-page report.
- ☐ Reading: University Physics, Volume 3

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Gases, thermodynamics and kinetics in physical chemistry	☐	☐	☐	☐
Molecular spectroscopy: infrared, UV-visible, reading spectra	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.8 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S5

YEAR 3 · ADVANCED SCIENCES · 198 H · ≈ 9.9 H PER WEEK

Quantum physics and matter

From ___ / ___ to ___ / ___

Move from classical to modern physics: relativity, quantum mechanics, advanced electrodynamics, condensed matter and statistical thermodynamics.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
Understanding Modern Physics I: Relativity and Cosmology Understanding Modern Physics Specialization	11 h	W. 1–2	☐
Understanding Modern Physics II: Quantum Mechanics and Atoms Understanding Modern Physics Specialization	11 h	W. 2–3	☐
Understanding Modern Physics III: Simplicity and Complexity Understanding Modern Physics Specialization	7 h	W. 3	☐
Foundations of Quantum Mechanics Quantum Mechanics for Engineers	27 h	W. 3–6	☐
Theory of Angular Momentum Quantum Mechanics for Engineers	13 h	W. 6–7	☐
Approximation Methods Quantum Mechanics for Engineers	14 h	W. 7–9	☐
Electrodynamics: An Introduction Electrodynamics	13 h	W. 9–10	☐
Electrodynamics: Analysis of Electric Fields Electrodynamics	11 h	W. 10–11	☐
Electrodynamics: Electric and Magnetic Fields Electrodynamics	12 h	W. 11–13	☐
Electrodynamics: In-depth Solutions for Maxwell's Equations Electrodynamics	19 h	W. 13–14	☐
Phases of Matter: Solid, Liquid, Gas and Beyond The Physics of Emergence: Introduction to Condensed Matter	13 h	W. 14–16	☐
Universal Theories The Physics of Emergence: Introduction to Condensed Matter	14 h	W. 16–17	☐
Modern Topics in Condensed Matter Physics The Physics of Emergence: Introduction to Condensed Matter	12 h	W. 17–18	☐
Statistical Molecular Thermodynamics Statistical Molecular Thermodynamics	21 h	W. 18–20	☐

TARGET SKILLS

- ☐ Introductory special relativity, atoms and quanta
- ☐ Schrödinger equation, angular momentum, approximation methods
- ☐ Advanced solutions of Maxwell's equations
- ☐ Phases of matter, universal theories, modern topics in condensed matter
- ☐ Partition functions and the link between molecular properties and thermodynamics

SEMESTER PROJECT

Solve the one-dimensional Schrödinger equation numerically in Python (finite well, harmonic oscillator) by finite differences, and compare the energy levels with theory.

Signed off on ___ / ___ / _____

READING

- ☐ Quantum Mechanics
- ☐ Electromagnetism
- ☐ Statistical Physics
- ☐ Solid State Physics
- ☐ The Feynman Lectures on Physics, Volume III

MY GOAL FOR THIS SEMESTER

81

YEAR 3 · S5 · WEEK 1/20 · ≈ 9.9 H

Understanding Modern Physics I: Relativity and Cosmology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Understanding Modern Physics I: Relativity and Cosmology · start · ≈ 9.9 h
- ☐ Reading: Quantum Mechanics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory special relativity, atoms and quanta	☐	☐	☐	☐
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

82

YEAR 3 · S5 · WEEK 2/20 · ≈ 9.9 H

Understanding Modern Physics I: Relativity and Cosmology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Understanding Modern Physics I: Relativity and Cosmology · finish · ≈ 1.1 h
- ☐ Understanding Modern Physics II: Quantum Mechanics and Atoms · start · ≈ 8.8 h
- ☐ Reading: Electromagnetism

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Advanced solutions of Maxwell's equations	☐	☐	☐	☐
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

83

YEAR 3 · S5 · WEEK 3/20 · ≈ 9.9 H

Understanding Modern Physics II: Quantum Mechanics and Atoms

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Understanding Modern Physics II: Quantum Mechanics and Atoms · finish · ≈ 2.2 h
- ☐ Understanding Modern Physics III: Simplicity and Complexity · ≈ 7 h
- ☐ Foundations of Quantum Mechanics · start · ≈ 0.7 h
- ☐ Reading: Statistical Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐
Introductory special relativity, atoms and quanta	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

84

YEAR 3 · S5 · WEEK 4/20 · ≈ 9.9 H

Foundations of Quantum Mechanics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Foundations of Quantum Mechanics · continued · ≈ 9.9 h
- ☐ Reading: Solid State Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐
Advanced solutions of Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

85

YEAR 3 · S5 · WEEK 5/20 · ≈ 9.9 H

Foundations of Quantum Mechanics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Foundations of Quantum Mechanics · continued · ≈ 9.9 h
- ☐ Reading: The Feynman Lectures on Physics, Volume III

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

86

YEAR 3 · S5 · WEEK 6/20 · ≈ 9.9 H

Foundations of Quantum Mechanics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Foundations of Quantum Mechanics · finish · ≈ 6.5 h
- ☐ Theory of Angular Momentum · start · ≈ 3.4 h
- ☐ Reading: Quantum Mechanics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory special relativity, atoms and quanta	☐	☐	☐	☐
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

87

YEAR 3 · S5 · WEEK 7/20 · ≈ 9.9 H

Theory of Angular Momentum

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Theory of Angular Momentum · finish · ≈ 9.6 h
- ☐ Approximation Methods · start · ≈ 0.3 h
- ☐ Reading: Electromagnetism

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Advanced solutions of Maxwell's equations	☐	☐	☐	☐
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

88

YEAR 3 · S5 · WEEK 8/20 · ≈ 9.9 H

Approximation Methods

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Approximation Methods · continued · ≈ 9.9 h
- ☐ Reading: Statistical Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐
Introductory special relativity, atoms and quanta	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

89

YEAR 3 · S5 · WEEK 9/20 · ≈ 9.9 H

Approximation Methods

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Approximation Methods · finish · ≈ 3.8 h
- ☐ Electrodynamics: An Introduction · start · ≈ 6.1 h
- ☐ Reading: Solid State Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐
Advanced solutions of Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

90

YEAR 3 · S5 · WEEK 10/20 · ≈ 9.9 H

Electrodynamics: An Introduction

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Electrodynamics: An Introduction · finish · ≈ 6.9 h
- ☐ Electrodynamics: Analysis of Electric Fields · start · ≈ 3 h
- ☐ Reading: The Feynman Lectures on Physics, Volume III

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

91

YEAR 3 · S5 · WEEK 11/20 · ≈ 9.9 H

Electrodynamics: Analysis of Electric Fields

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Electrodynamics: Analysis of Electric Fields · finish · ≈ 8 h
- ☐ Electrodynamics: Electric and Magnetic Fields · start · ≈ 1.9 h
- ☐ Reading: Quantum Mechanics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory special relativity, atoms and quanta	☐	☐	☐	☐
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

92 Electrodynamics: Electric and Magnetic Fields

YEAR 3 · S5 · WEEK 12/20 · ≈ 9.9 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Electrodynamics: Electric and Magnetic Fields · continued · ≈ 9.9 h
- ☐ Reading: Electromagnetism

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Advanced solutions of Maxwell's equations	☐	☐	☐	☐
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

93

YEAR 3 · S5 · WEEK 13/20 · ≈ 9.9 H

Electrodynamics: Electric and Magnetic Fields

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Electrodynamics: Electric and Magnetic Fields · finish · ≈ 0.2 h
- ☐ Electrodynamics: In-depth Solutions for Maxwell's Equations · start · ≈ 9.7 h
- ☐ Reading: Statistical Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐
Introductory special relativity, atoms and quanta	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

94 Electrodynamics: In-depth Solutions for Maxwell's Equations

YEAR 3 · S5 · WEEK 14/20 · ≈ 9.9 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Electrodynamics: In-depth Solutions for Maxwell's Equations · finish · ≈ 9.3 h
- ☐ Phases of Matter: Solid, Liquid, Gas and Beyond · start · ≈ 0.6 h
- ☐ Reading: Solid State Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐
Advanced solutions of Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

95 Phases of Matter: Solid, Liquid, Gas and Beyond

YEAR 3 · S5 · WEEK 15/20 · ≈ 9.9 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Phases of Matter: Solid, Liquid, Gas and Beyond · continued · ≈ 9.9 h
- ☐ Reading: The Feynman Lectures on Physics, Volume III

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

96 Phases of Matter: Solid, Liquid, Gas and Beyond

YEAR 3 · S5 · WEEK 16/20 · ≈ 9.9 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Phases of Matter: Solid, Liquid, Gas and Beyond · finish · ≈ 2.5 h
- ☐ Universal Theories · start · ≈ 7.4 h
- ☐ Reading: Quantum Mechanics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Introductory special relativity, atoms and quanta	☐	☐	☐	☐
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

97

YEAR 3 · S5 · WEEK 17/20 · ≈ 9.9 H

Universal Theories

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Universal Theories · finish · ≈ 6.6 h
- ☐ Modern Topics in Condensed Matter Physics · start · ≈ 3.3 h
- ☐ Reading: Electromagnetism

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Advanced solutions of Maxwell's equations	☐	☐	☐	☐
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

98 Modern Topics in Condensed Matter Physics

YEAR 3 · S5 · WEEK 18/20 · ≈ 9.9 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Modern Topics in Condensed Matter Physics · finish · ≈ 8.7 h
- ☐ Statistical Molecular Thermodynamics · start · ≈ 1.2 h
- ☐ Reading: Statistical Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐
Introductory special relativity, atoms and quanta	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

99

YEAR 3 · S5 · WEEK 19/20 · ≈ 9.9 H

Statistical Molecular Thermodynamics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Molecular Thermodynamics · continued · ≈ 9.9 h
- ☐ **Semester project**: Solve the one-dimensional Schrödinger equation numerically in Python (finite well, harmonic oscillator) by finite differences, and compare the energy levels with theory.
- ☐ Reading: Solid State Physics

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Schrödinger equation, angular momentum, approximation methods	☐	☐	☐	☐
Advanced solutions of Maxwell's equations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

100

YEAR 3 · S5 · WEEK 20/20 · ≈ 9.9 H

Statistical Molecular Thermodynamics

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistical Molecular Thermodynamics · finish · ≈ 9.9 h
- ☐ **Semester project**: Solve the one-dimensional Schrödinger equation numerically in Python (finite well, harmonic oscillator) by finite differences, and compare the energy levels with theory.
- ☐ Reading: The Feynman Lectures on Physics, Volume III

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Phases of matter, universal theories, modern topics in condensed matter	☐	☐	☐	☐
Partition functions and the link between molecular properties and thermodynamics	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 9.9 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

S6

YEAR 3 · ADVANCED SCIENCES · 202 H · ≈ 10.1 H PER WEEK

The universe, quantum chemistry and systems biology

From ___ / ___ to ___ / ___

Apply the tools of physics, chemistry and statistics at three great scales: the universe, the molecule and living systems.

SEMESTER PROGRAMME

Course	Length	Weeks	Done
An Introduction to Astronomy Astronomy and Cosmology: Exploring the Universe	9 h	W. 1	☐
Extra-Galactic Astronomy Astronomy and Cosmology: Exploring the Universe	8 h	W. 1–2	☐
Cosmology Astronomy and Cosmology: Exploring the Universe	11 h	W. 2–3	☐
Density Functional Theory Density Functional Theory	26 h	W. 3–6	☐
Introduction to Genomic Technologies Genomic Data Science Specialization	6 h	W. 6	☐
Python for Genomic Data Science Genomic Data Science Specialization	8 h	W. 6–7	☐
Algorithms for DNA Sequencing Genomic Data Science Specialization	12 h	W. 7–8	☐
Command Line Tools for Genomic Data Science Genomic Data Science Specialization	12 h	W. 8–10	☐
Bioconductor for Genomic Data Science Genomic Data Science Specialization	9 h	W. 10	☐
Statistics for Genomic Data Science Genomic Data Science Specialization	9 h	W. 11	☐
Introduction to Systems Biology Systems Biology and Biotechnology Specialization	19 h	W. 11–13	☐
Experimental Methods in Systems Biology Systems Biology and Biotechnology Specialization	18 h	W. 13–15	☐
Network Analysis in Systems Biology Systems Biology and Biotechnology Specialization	30 h	W. 15–18	☐
Dynamical Modeling Methods for Systems Biology Systems Biology and Biotechnology Specialization	19 h	W. 18–20	☐
Integrated Analysis in Systems Biology Systems Biology and Biotechnology Specialization	4 h	W. 20	☐
Systems Biology and Biotechnology Capstone Systems Biology and Biotechnology Specialization	2 h	W. 20	☐

TARGET SKILLS

- ☐ Astronomy, galaxies and cosmology
- ☐ Density functional theory and electronic structure calculations
- ☐ Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics
- ☐ Systems biology: experimental methods, networks and dynamical models

SEMESTER PROJECT

The final project: the Systems Biology capstone, extended with a dynamical model of a biological network (differential equations) fitted to public data.

Signed off on ___ / ___ / _____

READING

- ☐ Cosmology
- ☐ Density Functional Theory: A Practical Introduction, 2nd edition
- ☐ Computational Genomics with R
- ☐ An Introduction to Systems Biology: Design

101

YEAR 3 · S6 · WEEK 1/20 · ≈ 10.1 H

An Introduction to Astronomy

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ An Introduction to Astronomy · ≈ 9 h
- ☐ Extra-Galactic Astronomy · start · ≈ 1.1 h
- ☐ Reading: Cosmology

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

102 Extra-Galactic Astronomy

YEAR 3 · S6 · WEEK 2/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Extra-Galactic Astronomy · finish · ≈ 6.9 h
- ☐ Cosmology · start · ≈ 3.2 h
- ☐ Reading: Density Functional Theory: A Practical Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

103 Cosmology

YEAR 3 · S6 · WEEK 3/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Cosmology · finish · ≈ 7.8 h
- ☐ Density Functional Theory · start · ≈ 2.3 h
- ☐ Reading: Computational Genomics with R

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

104 Density Functional Theory

YEAR 3 · S6 · WEEK 4/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Density Functional Theory · continued · ≈ 10.1 h
- ☐ Reading: An Introduction to Systems Biology: Design Principles of Biological Circuits, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

105 Density Functional Theory

YEAR 3 · S6 · WEEK 5/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Density Functional Theory · continued · ≈ 10.1 h
- ☐ Reading: Cosmology

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

106 Density Functional Theory

YEAR 3 · S6 · WEEK 6/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Density Functional Theory · finish · ≈ 3.5 h
- ☐ Introduction to Genomic Technologies · ≈ 6 h
- ☐ Python for Genomic Data Science · start · ≈ 0.6 h
- ☐ Reading: Density Functional Theory: A Practical Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

107

YEAR 3 · S6 · WEEK 7/20 · ≈ 10.1 H

Python for Genomic Data Science

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Python for Genomic Data Science · finish · ≈ 7.4 h
- ☐ Algorithms for DNA Sequencing · start · ≈ 2.7 h
- ☐ Reading: Computational Genomics with R

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

108

YEAR 3 · S6 · WEEK 8/20 · ≈ 10.1 H

Algorithms for DNA Sequencing

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Algorithms for DNA Sequencing · finish · ≈ 9.3 h
- ☐ Command Line Tools for Genomic Data Science · start · ≈ 0.8 h
- ☐ Reading: An Introduction to Systems Biology: Design Principles of Biological Circuits, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

109 Command Line Tools for Genomic Data Science

YEAR 3 · S6 · WEEK 9/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Command Line Tools for Genomic Data Science · continued · ≈ 10.1 h
- ☐ Reading: Cosmology

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

110 Command Line Tools for Genomic Data Science

YEAR 3 · S6 · WEEK 10/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Command Line Tools for Genomic Data Science · finish · ≈ 1.1 h
- ☐ Bioconductor for Genomic Data Science · ≈ 9 h
- ☐ Reading: Density Functional Theory: A Practical Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

111

YEAR 3 · S6 · WEEK 11/20 · ≈ 10.1 H

Statistics for Genomic Data Science

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Statistics for Genomic Data Science · ≈ 9 h
- ☐ Introduction to Systems Biology · start · ≈ 1.1 h
- ☐ Reading: Computational Genomics with R

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

112

YEAR 3 · S6 · WEEK 12/20 · ≈ 10.1 H

Introduction to Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Systems Biology · continued · ≈ 10.1 h
- ☐ Reading: An Introduction to Systems Biology: Design Principles of Biological Circuits, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

113

YEAR 3 · S6 · WEEK 13/20 · ≈ 10.1 H

Introduction to Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Introduction to Systems Biology · finish · ≈ 7.8 h
- ☐ Experimental Methods in Systems Biology · start · ≈ 2.3 h
- ☐ Reading: Cosmology

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

114

YEAR 3 · S6 · WEEK 14/20 · ≈ 10.1 H

Experimental Methods in Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Experimental Methods in Systems Biology · continued · ≈ 10.1 h
- ☐ Reading: Density Functional Theory: A Practical Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

115

YEAR 3 · S6 · WEEK 15/20 · ≈ 10.1 H

Experimental Methods in Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Experimental Methods in Systems Biology · finish · ≈ 5.6 h
- ☐ Network Analysis in Systems Biology · start · ≈ 4.5 h
- ☐ Reading: Computational Genomics with R

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

116

YEAR 3 · S6 · WEEK 16/20 · ≈ 10.1 H

Network Analysis in Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Network Analysis in Systems Biology · continued · ≈ 10.1 h
- ☐ Reading: An Introduction to Systems Biology: Design Principles of Biological Circuits, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

117

YEAR 3 · S6 · WEEK 17/20 · ≈ 10.1 H

Network Analysis in Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Network Analysis in Systems Biology · continued · ≈ 10.1 h
- ☐ Reading: Cosmology

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

118

YEAR 3 · S6 · WEEK 18/20 · ≈ 10.1 H

Network Analysis in Systems Biology

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Network Analysis in Systems Biology · finish · ≈ 5.3 h
- ☐ Dynamical Modeling Methods for Systems Biology · start · ≈ 4.8 h
- ☐ Reading: Density Functional Theory: A Practical Introduction, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

119 Dynamical Modeling Methods for Systems Biology

YEAR 3 · S6 · WEEK 19/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Dynamical Modeling Methods for Systems Biology · continued · ≈ 10.1 h
- ☐ **Semester project**: The final project: the Systems Biology capstone, extended with a dynamical model of a biological network (differential equations) fitted to public data.
- ☐ Reading: Computational Genomics with R

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Astronomy, galaxies and cosmology	☐	☐	☐	☐
Density functional theory and electronic structure calculations	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____

120 Dynamical Modeling Methods for Systems Biology

YEAR 3 · S6 · WEEK 20/20 · ≈ 10.1 H

From ___ / ___ to ___ / ___

Status: ☐ To do ☐ Doing ☐ Done

THIS WEEK

- ☐ Dynamical Modeling Methods for Systems Biology · finish · ≈ 4.1 h
- ☐ Integrated Analysis in Systems Biology · ≈ 4 h
- ☐ Systems Biology and Biotechnology Capstone · ≈ 2 h
- ☐ **Semester project**: The final project: the Systems Biology capstone, extended with a dynamical model of a biological network (differential equations) fitted to public data.
- ☐ Reading: An Introduction to Systems Biology: Design Principles of Biological Circuits, 2nd edition

PERSONAL GOAL

EXPLAIN TO YOUR PARTNER

Idea explained in 5 min without notes:

Clear? ☐ Yes ☐ Partly ☐ Review

I CAN DO IT

	Not yet	With help	Alone	I can explain it
Genomic technologies, Python, command-line tools, Bioconductor and genomic statistics	☐	☐	☐	☐
Systems biology: experimental methods, networks and dynamical models	☐	☐	☐	☐

TIME SPENT

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Plan								≈ 10.1 h
Actual								

WHAT I LEARNED

WHAT BLOCKED ME

QUESTIONS TO ASK

Energy: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Adjustment for next week: _____