

# Physical Modelling Plan – 2021

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This plan is regularly updated and changed, so please check it before preparing for class.

## **Week 41 Introduction, Coulombs law, Ohms law, Kirchows law, Models with DC-current**

Monday: **Canceled** read about charge (Ohanian chapter 22).

Tuesday: Read note 1+2

Thursday: Experiment 1

## **Week 42 Energy bonds, Complex Numbers, Capacitance**

Monday: Finish experiment 1, Energy bonds, note 3

Tuesday: Complex numbers, extra material

Thursday: **Canceled** read about capacitance (Ohanian chapter 26).

## **Week 43 AC-circuits, Measuring impedance**

Monday: AC-circuits, note 4

Tuesday: Impedance, note 5

Thursday: Measuring impedance, note 6 **Deadline for first report.**

## **Week 44, Measuring impedance, theory on magnetic fields and inductance**

Monday: Start experiment 2, read about magnetic forces (Ohanian chapter 29)

Tuesday: Experiment 2, read about magnetic fields (Ohanian chapter 30)

Thursday: Magnetic induction (Ohanian chapter 31)

## **Week 45, The first steps of modelling**

Monday: The first steps of modelling, note 7

Tuesday: Work on experiment 2 and exercises in note 7

Thursday: **Canceled** **Deadline for second report.**

## **Week 46, The Maxwell model**

Monday: Experiment 3, read about the RC-circuit and Maxwell-materials in other sources.

Tuesday: Continue experiment 3

Thursday: Other response functions, note 8

## **Week 47, Outlook and overview**

Monday: Read Harrison on Maxwell Model (in extra material)

Tuesday: Linear Response Theory, note 9, and Overview, note 10

Thursday: Work on last report

Friday: **Deadline for third/last report.**