



making physics matter

Mentoring framework

Week 1 – Introduction and the transition to university

The focus this week:

Thinking about the transition to university.

Actions:

Training for mentees on platforms
Fill out a personal profile and get to know each other
Encourage the asking of questions
Poke around the platform and available resources

Useful starter questions:

Think of a previous experience of 'transition' in education that you have experienced
Consider how you dealt with being in a new learning environment
Similarities / differences to school
Have you had any experience of online learning?

Week 2 – A day in the life of an undergraduate

The focus this week:

What it's like being an undergraduate student on campus.

Actions:

Have a go at budgeting
Discuss living on campus and how you can manage your finances eg loans / scholarships / part-time jobs etc
Look at the differences between a physics timetable and a humanities timetable
Discuss the differences between seminars / lectures / labs / tutorials etc
What are the different types of assignments?

Useful starter questions:

Think about the types of classes you have attended already (eg in school, college, or other educational settings)
How do labs differ at university from school?
What are expectations around grades and pass levels?
What are the different marking criteria?
What is a reasonable grade?
What surprised you about your daily experiences?

Week 3 – Your first physics lecture

The focus this week:

What does a typical undergraduate lecture look like?

Actions:

Watch the first 10 minutes of some of the available lectures and try making notes

Useful starter questions:

How do you take notes in lectures?
Does it differ / depend on the subject / topic / teacher?
What does a good / bad lecture / lecturer look like?

Week 4 – Journal club I

The focus this week:

Look at the different ways scientists share their research.

Actions:

Rearrange this scientific content in a nice sensible order – decide what to include and what isn't necessary

Useful starter questions:

Look at a scientific poster / extract of a paper / review paper

Week 5 – Revision / learning skills

The focus this week:

How do you learn and revise?

Actions:

Discuss top tips

Useful starter questions:

How do you make notes?

What do you do when you don't understand a topic?

How do you set aside time and space when learning for yourself?

Is it ok to look at the answers when you are stuck?

Who do you go to for help?

How do you form a study group which benefits all members?

How do you learn without just copying?

Week 6 – Success 101

The focus this week:

How to learn from your mistakes and access the support you need

Actions:

Potential mentor panel webinar

Discuss top tips

Useful starter questions:

How to manage your workload

How to catch up on missed work

Who to ask for help and support

Realistically how much time needs to be put in to do well in a course eg on coursework, reading, exam prep etc

Should this be proportional to weighting towards degree mark?

Available services – counselling / mental health support / coping with anxiety / looking after your well-being

Social life / academic balance

Time management

Peer support eg societies

Week 7 – Physics labs

The focus this week:

What does a first-year lab look like?

Actions:

Look at undergraduate lab books and discuss how and why things were recorded in that manner.

Could they be improved?

Useful starter questions:

What do you struggle with when carrying out labs?

What do you enjoy?

How do you learn with others without just copying?

Week 8 – Mentee-guided

The focus this week:

The mentee may have thought of things they specifically wish to discuss and should be allowed to lead the conversation.

Actions:

General chat / top tips

Useful starter questions:

How do you pick optional modules for your degree programme?

What are projects?

Get a taster of topics available

What academic support is available?

How to get support with your subject content

Week 9 – Journal club II

The focus this week:

How to read a whole paper.

Actions:

Look at the structure of a report – why is it so ordered?

Useful starter questions:

How do you know the sources are reliable?

How do you spot fake news?

What do you do with conspiracy theories?

How do you use Wikipedia?

What is plagiarism?

Week 10 – What next?

The focus this week:

Thinking about your future.

Actions:

Look at good CVs / cover letters

Discuss scholarship / internship opportunities

Look at case studies of successful physicists

Useful starter questions:

What careers fairs should you go to?

How do you approach an academic for an internship?

What careers are available to physics graduates?