

# Combining Physics Classes in 2024

## Zoom meeting: Monday, 11<sup>th</sup> Dec

### Possible topics for Discussion

1. Scheduling topics
2. Teaching styles
3. Practical Activities
4. Assessment tasks

#### 1. Scheduling topics

You have the flexibility to reorder the Areas of Study in all four Units to improve your effectiveness.

For Units 1 and 2, the Areas of Study can be done in any order.

For Units 3 and 4 there are some VCAA constraints:

*The Unit 3 School-based Assessment results are not due to VASS until around September so schools need to ensure that students are taught the content, assessed and have opportunities to redeem any Ns before this date. Schools may also have their own internal dates for submission of results to meet the VASS deadline too. Typically study designs are written in sequence content/understanding in Units 3 and 4 and schools need to be mindful not to create unnecessary stress for students when delivering the content but there is flexibility. Unit 4 results are due around November.*

With the full study design now in operation, there will be no content in common next year as was the case in 2023.

So it would be advantageous as far as practical activities are concerned that related content across the two programs is covered together. For example do Unit 2 Motion and Unit 3 Motion at the same time, similarly Unit 1 Electricity and Unit 3 Electric energy and possibly Unit 1 Light and aspects of Unit 4 Light.

A possible course plan is:

| Order | Year 11                | Year 12                          |
|-------|------------------------|----------------------------------|
| 1     | Unit 2: Motion         | Unit 3: Motion and Fields (Grav) |
| 2     | Unit 1: Nuclear        | Unit 3: Fields (Elec and Mag)    |
| 3     | Unit 1: Electricity    | Unit 3: Electrical Energy        |
| 4     | Unit 2: Investigations | Unit 4: Investigation            |
| 5     | Unit 1: Light and Heat | Unit 4: Light and matter         |
| 6     | Unit 2: Options        | Unit 4: Relativity               |

#### Class Time per Unit:

<https://www.vcaa.vic.edu.au/administration/vce-vcal-handbook/Pages/index.aspx>

Each VCE unit involves 50 hours of scheduled classroom instruction. In addition, students undertake up to 50 hours of self-directed learning for each unit. Satisfactory completion of a VCE unit is based on successful completion of outcomes. Satisfactory unit completion is determined by the school, in accordance with VCAA requirements.

Guidelines may be set by the Victorian Qualifications Authority and are beyond the control of the VCAA. Their remit is in preparing curriculum and assessment materials. Implementation is not within their jurisdiction.

## **2. Teaching Styles**

There are a few strategies that can assist with spreading your time across the two groups.

Some topics such as Nuclear physics, that are not complex in content or reliant on practical activities can be covered by giving students more independence by working in small groups through a set of tasks using text and AV resources. This can free you up to work more closely with the other group. The Unit 2 options also have this potential.

In Unit 1 Electricity the practical activities are often quick for students to set up and take measurements. This means the topic can be presented as a set of self-paced tasks, built around short practical activities. In this format, the teacher's role is more informal, more from group to group as they need help, etc. This format could also free up some class time to work with the other group. With such a self-paced structure, the students who have moved ahead of the others, can check the faulty circuits of others in the class. There are work booklets for this approach on the Vicphysics website.

## **3. Practical Activities**

Where possible, practical activities for the two groups should be scheduled in the same period. Not only is it more effective use of your time, there are informal benefits for the students from seeing the pracs they will do next year, or the ones they did last year.

## **4. Assessment Tasks**

It may not always be possible to schedule assessment tasks for both groups at the same time. It may be possible to have one of the groups do the task in another room and ask a colleague to supervise.