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| |  | | --- | | Graduate Certificate of Secondary Design Technologies  Course Outline | |  |

# **Overview**

The Graduate Certificate in Secondary Design and Technologies consists of 4 units that participants must complete over 2 years to receive their qualification. The Technologies and Society and Creating Design Solutions strands of the Victorian Curriculum: Design and Technologies are explored through all four units, with an emphasis on the four Technologies Contexts in the central two units. Teachers will develop a more sophisticated understanding of the design process and systems thinking and its economic, environmental, ethical, legal, and aesthetic role in our society both locally and globally, allowing them to integrate a range of materials and technologies into their teaching practice.

# **Face-to-face intensives and after-school online workshops**

Each unit will comprise two 2-day intensives over the semester (one per term) and four 90-minute online workshops (per semester) held after school hours. **Note:** Venues for each intensive will vary across the units (see below).

The intensives will involve activities designed to focus on developing participant content knowledge, knowledge of contemporary practices of the field, knowledge of student learning processes, and teaching strategies and pedagogical practices to support student learning. This will include a mixture of hands-on experiential learning, peer-to-peer discussion and sharing, and exposure to a range of materials, resources, and technologies.

The online after-school workshops will prepare for and build on the face-to-face intensives and provide opportunities for critical review of practice. They will allow participating teachers to engage with unit staff and peers to share progress and approaches and clarify and discuss learning and assessment task. Online workshop dates will be provided on enrolment.

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| Intensive Days | | Date | Venue |
| Unit 1 | 1-2 | 20-21 February 2024 | Monash Tech School, Clayton |
|  | 3-4 | 7-8 May 2024 | Deakin Waurn Ponds Campus, Geelong |
| Unit 2 | 5-6 | 6-7 August 2024 | Deakin Waurn Ponds Campus, Geelong |
|  | 7-8 | 29-30 October 2024 | Whittlesea Tech School, Epping |
| Unit 3 | 9-10 | 18-19 February 2025 | Whittlesea Tech School, Epping |
|  | 11-12 | 13-14 May 2025 | Deakin Waurn Ponds Campus, Geelong |
| Unit 4 | 13-14 | 12-13 August 2025 | Monash Tech School, Clayton |
|  | 15-16 | 28-29 October 2025 | Deakin Downtown, Melbourne CBD |

**Note:** Further information on the facilities including accommodation, parking and public transport options will be provided in your enrolment package.

# **Course Unit Descriptors**

Unit 1 (Semester 1 2024): EDT705 Design and Systems Thinking

In this unit, teachers will use systems design processes to investigate authentic problems, generate and produce material and system solutions, and evaluate products. They will investigate and work with a variety of materials and techniques to explore design and production process and systems thinking. The methodology used within this unit gives teachers the skills to plan, construct and manage projects enabled by technologies from conception to realisation.

Unit 2 (Semester 2 2024): EDT706 Engineering systems, food and fibre production

This unit applies the design ideas and skills learned in the first unit to explore engineering systems, food and fibre production. Teachers will examine the principles that underpin these contexts by considering the materials and technologies in harvested and manufactured food and fibre, and the challenges involved in managing these resources through creating designed solutions in sustainable agricultural systems.

Unit 3 (Semester 1 2025): EDT707 Food and material processing technologies

In this unit, teachers will recognise and apply high-level technologies in their classrooms. They will review the equipment in their school and their local community. They will critically engage with the historical, social, and cultural contexts of food processing and material processing technologies and analyse emerging food processing and material processing technologies and their capacity and uses in education. Teachers will develop activities and approaches to teaching and learning that recognise the link between technological principles and pedagogy.

Unit 4 (Semester 2 2025): EDT708 Ethical and sustainable design in local and global context

This unit is the capstone of the course. Framed by the design process, teachers will draw together the knowledge developed in earlier units to design, evaluate and present their design and technologies classroom practices and resources. They will develop one or more technological context, supported by design and systems thinking, focused on pedagogy, curriculum and assessment.

**Assessment Requirements**

Each unit involves two assessments, approximately 5000 words in total. Assessment is modelled through the units, providing teachers with research-based investigations into teaching practices. Assessments are designed to assist the teachers in transferring the knowledge, skills, and dispositions they develop in the preparation, participation in and follow-up of the intensives to their classroom practice and within their schools. Each of the eight assessments builds on the intensives and is scaffolded and spaced in response to the workloads of participating teachers.

**Support**

# Support for the academic requirements of the course will be provided by dedicated Deakin University staff. Additionally, experienced Design and Technologies teachers will provide small group mentorship to assist with applying course learning in the classroom.