

*Davidson* High School

2018

Creative and Critical Thinking  
Year 10 courses

# Critical and Creative Thinking

## Electives

### Year 10 2018

This is the next stage of your Critical and Creative Thinking Program for Stage 5.

Please note the following curriculum pattern for Year 10 in 2018:

#### Core

- 4 periods of English, Maths, Science, HSIE
- 2 periods PDHPE

#### Electives

- 2 traditional electives – continuing from Year 9
- 1 x 75 hour critical and creative thinking elective

The following Critical and Creative Thinking electives will be offered and will be taught during one double period per week across the whole year.

- Dream Catchers: Representations of dreams from cave art to cyberspace
- Costume Design & Rendering
- Design STUDIO 10
- Language of Mathematics - Problem Solving
- Film Studies
- Acting to Camera and Film-Making
- Forensic Science
- The Investigators
- Molecular Gastronomy
- Philosophy and Ethics at Davidson
- Outdoor Education
- English as a Second Language

# Costume Design and Rendering

This course will enable students to develop critical thinking skills in the design and development of pattern making and the construction of costumes. Students will have to problem solve solutions for the design and construction of garments suitable for film, theatre, dance or live performances. They will modify, manipulate, construct and evaluate patterns, fabric and textile techniques to produce 2 pieces of work throughout the course.

Students will complete TWO in depth projects in this course. One project will involve a dance or exercise garment using difficult stretch fabrics and complex problem solving skills. The second project will be related to a film or musical of their choice. They will render their design using a variety of sketching techniques, source and modify patterns and construct their design using complex design features.

**Students are responsible for purchasing their own fabric**

**Course cost \$50**

## Design Studio 10

Mini Projects in Photography, Magazine Design, Illustration, Object Design and Digital imaging and the emerging use of Information, Communication Technologies, Digital Media forms and presentation techniques.

Students build unique ideas, play with different materials and take a hands on approach in the various projects and field of visual communication. This Critical and Creative thinking course can help students in their pathways of learning in the Senior School and even future employment, adding

competency in various ICT programs for their CV.

The projects encourage students to become more informed and active participants in, and consumers of print, object and space-time design in contemporary culture and design that surrounds them.

Students will be using Adobe Creative Suite including Photoshop, Illustrator and Indesign, to become creative and competent designers using emerging ICT presentation techniques.

**Course Cost \$40**

## Molecular Gastronomy

Do you love Masterchef? Has Heston Blumenthal captured your imagination? This is the course for you. We look at the link between science and food.

From this comes the interest in applying the techniques of food scientists to fine dining – liquefying, gassing, freezing and generally transforming ingredients into surprising new forms and textures while maintaining the flavours.

Molecular gastronomy applies the principles of chemistry and physics to cooking - by examining how foods react to different cooking methods and which foods combine well on a chemical level chefs are able to experiment with new food combinations and methods to create unusual menus with stunning results.

This course provides opportunities for students to explore the role of food in human society and the role of a consumer scientist as a food industry specialist. It involves an examination of the practical and theoretical aspects of food preparation, including

sensory evaluation, in the process of the responsible and sustainable development of products for consumers.

As well as contributing to the overall development of capabilities, this course provides students with opportunities to develop skills in leadership, cooperative teamwork, critical analysis of a problems in product development, and in communicating information to others.

Students will

1. Experiment with a wide range of foods and flavour combinations
2. Evaluate the sensory attributes and quality of foods.
3. Understand the process of food product development and design and develop their own creative foods.
4. Examine the role of food presentation skills, use ingredients such as dry ice to create masterpieces.

Look at new gastronomical ingredients and methods such as spherification, foams, deconstructed recipes, infusing flavours, and creating gels.

If you are passionate about cooking, have a creative mind and at the same time you are analytical and logical, molecular gastronomy is most likely going to become your passion. Molecular gastronomy cooking requires a good use of your left brain and right brain

**Course cost \$150**

## Language of Mathematics – Problem Solving

The astronomer Galileo Galilee observed in 1623 that the entire universe is “written in the language of Mathematics”.

If you are the kind of student who wakes up enthusiastically in the morning yearning to get to your mathematics class, then this course should satisfy your passion. It provides a deeper understanding of Arithmetic and Algebra, which will prepare you for further studies in Mathematics. You will gain a new perspective of Algebra as we view it as a language used in the process of problem solving.

*“Pure mathematics is, in its way, the poetry of logical ideas”. ( Albert Einstein)*

**Course cost \$10**

## Philosophy and Ethics at Davidson

Should schools limit what students are allowed to access on the internet? Should cell phones be banned in school? Should we have a school uniform? Is it ever OK to murder someone? If your life depends on it, is everything justified? If everyone is unique, why can't some people drive before 16? Are there situations where drug use should be legalised? If someone you love is in pain should they have the right to end their own life?

Is it fair that the first world has 86% of the world's resources with only 20% of the population? Should we allow gay people to marry? Is there really any such thing as right and wrong or is it all about how we look at things? Should abortion be legal? Should we have the death penalty in Australia? Should humans ever be cloned? Do the nutrition and safety benefits outweigh the extra cost of organic food? Do

sport stars and movie stars deserve to be paid as much as they are? Is life ever really fair? How much should we trust what we know? Does God exist?

For the first time at Davidson we are offering a course for students who like to question, argue, debate and think about controversial issues. We will discuss, argue and explore some of these questions and others that you are interested in. You will learn how to spot good and poor arguments and develop your ability to discuss and share ideas on some of the BIG questions.

**Course cost Nil**

## Dream Catchers: Representations of dreams from cave art to cyberspace

Everybody dreams. Are you intrigued by the images, ideas and emotions that play out in your mind when you are sleeping? Throughout the history of humankind people have attempted to recall, re-enact and record the workings of the unconscious mind. Perhaps this is because dreams can be enlightening and nightmares can be unsettling. In this course students will examine how dreams have been 'caught' over time, space and culture. This exploration of visual, verbal and/or gestural representations of dreams will focus on artworks, films, dances, oral and written stories, along with multimodal and interactive texts. Students will ultimately become 'Dream Catchers' as they work in teams to devise and produce their own creative representation of a dream.

**Cost: Nil**

## Film Studies

Film is one of the most widely enjoyed mediums of entertainment, exposing many to worlds and cultures they might never encounter otherwise. In this course students will investigate the history of film and explore a wide variety of different genres and film makers as well as films from different cultures. As part of this course students will produce an analytical portfolio focused on a director or genre of their choice.

**Course cost Nil**

## Acting to Camera and Film Making

Have you always wanted to have your own youtube channel, create your own web-series or just love making your own short films in your spare time? This course will teach you the acting skills needed to create convincing characters on the screen. You will also analyse a variety of different mediums of film that is accessible by a click of a button online. You will learn the technical skills to bring your ideas to life onscreen. You will write, storyboard, plan your sequence of shots, film and edit your work using a variety of programs and cameras. You will create short films for competitions such as ScreenIt, Little Big Shots, Flickerfest and F3 (Smartphone). Who knows how far your work will take you! Your work will culminate in an end of year showcase.

**Cost: \$50**

## Forensic Science

Forensics is an emerging branch of science that uses problem solving and technology to analyse data and draw conclusions. The subject extends students with a focus on

science as inquiry and to understand that science is a human endeavour.

In this course, students are introduced to the fundamentals of forensic science through problem solving and investigative techniques. Students learn about:

- Fingerprinting
- Blood stains
- Trace evidence
- Crime scenes
- Tool mark examination
- Forensic chemistry

Students will gain the following skills in Forensics:

- Observational
- Evidence collection
- Evidence analysis
- Scepticism
- Critical thinking

**Cost: \$100**

## The Investigators

Real Scientists design experiments to answer questions to which they don't know the answer. Sometimes they find something completely new!

As a Real Scientist you will use experiments to answer some of your own questions and then look at how scientists are solving some of the big problems that the world is facing at the moment. You will meet with experts in the field both at school and in real science laboratories to see real science in action. You will design and carry out a research project of your choice that will be evaluated as part of the Silver CREST award, run by the CSIRO. Your

project may also be entered into other state and national Science and Engineering competitions. You will then look at some of the big challenges that the world is facing in the 21<sup>st</sup> Century and what science is doing to try and solve them. What can you contribute to the debate on Climate Change? Pollution in the oceans? Antibiotic resistance? If you think you might want to be a Real Scientist one day then this course is for you!

**Cost: \$100**

## Outdoor Education

Personal experience in a variety of outdoor settings helps young people to feel more comfortable in a range of environments. Learning firsthand about each environment, be it cold alpine, warm coastal, dry desert or non-familiar urban allows students to develop a sense of adaptability as each new area is explored. Familiarity brings a respect for the natural world, recognition of the part it plays in the lives of all humans, and often a commitment to protect and enhance it for its own intrinsic value. This subject would aim to give students an idea of what it would be like to work in the outdoor education area and adventure sports field which many of our students have shown an interest in.

**Cost: \$200**

## English as a+ Second Language

All International students are invited to complete this course.

**Cost: \$0**