

Welcome to learning debugging

Introduction

As a computer scientist, you would know that code doesn't always work the first time. That's why it is important to learn to debug. Most people already know how to debug to a certain extent. In fact, we debug almost every day without realising it.

This debugging learning resource aims to improve your debugging skills by providing a rules-based framework for thinking about debugging, and a series of practical learning modules on specific aspects of debugging.

The first step is a video introduction to *Debugging: The 9 Indispensable Rules for Finding Even the Most Elusive Software and Hardware Problems*. Click [here](#) or on the image below to begin watching. Note: You'll need your UNSW ZPass to login.



Overview and Structure of the Practical Content

Now that you have been exposed to the nine rules of debugging, you can proceed to the practical content that teaches a wide variety of specific techniques related to debugging.

This content is intended to support a broad audience and be independent of any specific course. As such, the practical content can be approached in three ways:

1. You are enrolled in a specific course and you'd like to do a subset of the material relevant to your specific course.
2. You'd like to improve on a specific aspect of your debugging that relates to one of the nine rules.
3. You'd like to just work your way through everything available.

The following sections group the material to facilitate each of these approaches to learning. Simply dive in and explore based on the approach most relevant to you!

Content by Course Code

- [Suggested COMP1511 Content](#)
- [Suggested COMP1521 Content](#)
- [Suggested COMP2521 Content](#)
- [Suggested COMP3231 Content](#)

Content Arranged by the Nine Rules

- [Understand the System](#)
- [Make it Fail](#)
- [Quit Thinking and Look](#)
- [Divide and Conquer](#)
- [Change One Thing at a Time](#)
- [Keep an Audit Trail](#)
- [Check the Plug](#)
- [Get a Fresh View](#)
- [If You Didn't Fix It, It Ain't Fixed](#)

All Content

- [All GDB Content](#)
- [Valgrind](#)
- [ASan](#)
- [Miscellaneous Modules](#)