

Certificate of Steel Detailing

by the Australian Construction Modellers Association

Course Structure:

The course is broken in 3 Units with 5 Modules per Unit. Each Unit can be purchased separately.

Reference Material:

The course has been designed around the Australian Steel Institute's (ASI) Australian Steel Detailers' Handbook Second Edition 2019.

Whilst not a requirement to complete the course, we would recommend purchasing a copy from the ASI's website as it will be a valuable resource to complete the training.

www.steel.org.au/resources/book-shop/australian-steel-detailers-handbook-hardcopy-or-ebook-bc2c76445b850968d105db10f7b4c013/

Delivery Method:

Online via www.acmatraining.org.au

Course Schedule:

There are no set dates for enrolment or course duration. Students can enrol online and commence when they wish and complete the course at their own pace.

Assessment:

Upon completing each Module, the student will have completed several assignments. These assignments will be graded and will form the basis for the overall assessment. The assessment will be carried out by a representative of the ACMA.

Course Objectives:

By the end of the course, students should have an understanding of:

Unit 1

- An overview of the industry and project participants relating to Structural Steel Fabrication
- The history of Steel Detailing
- The role of a Steel Detailer
- Compliance with Industry standards
- Materials and products used in Steel Fabrication and construction of Steel Structures
- Steel Grades, Profiles, suppliers
- Bolting and welding processes and products used
- An overview of Drafting, the tools required, drafting standards and the processes
- Elements of a Steel Structure and their associated connection types such as:
 - Columns
 - Beams
 - Trusses
 - Rafters
 - Bracing
 - Portal Frames

Unit 2

- Cold Rolled systems covering:
 - Purlins
 - Girts
 - Bridging
 - Fly Bracing
 - Eave struts
 - Proprietary systems
- Stairs, Grating, Handrail and Ladders including the associated standards
- Bolting covering areas such as:
 - Bolt types and categories
 - Bolt length selection
 - Bolt edge distances
 - Drafting standards for bolting
 - Installation of bolts
 - HD Bolts and Chemical Anchors
- Welding covering areas such as:
 - Joint and weld types
 - Butt welds and edge preparation
 - Welding symbols
- Galvanising

- Standard Structural connections such as:
 - Angle seat
 - End plate
 - Shear plate / Web side plate
 - Splices
 - Purlin and Girt connections
 - Baseplates
 - Bracing Connections
- Interpreting design documentation
- Working with CAD files or IFC files supplied by designers
- Working with Laser Scans
- Communicating issues - RFI's, Variations etc..

Unit3

- Arrangement Drawings / Marking plans covering areas such as:
 - Drawing sheets
 - 3rd Angle projection
 - Fundamentals of drawing set-out
 - Scales
 - HD Bolt layouts
 - Plans and Elevations
- Workshop drawings covering areas such as:
 - Drawing sheets
 - 3rd Angle projection
 - Fundamentals of drawing set-out
 - Scales
 - Workshop Assembly drawings and their purpose
 - Workshop Single part drawings and their purpose
 - Standard dimensioning practices for various drawing types
- Detailing for economy covering areas such as:
 - Standardised details,
 - Erection and erect ability
 - Ease of fabrication
 - Minimising Welding
 - Transportation
- Steel Detailing Deliverables:
 - 3D Models
 - 2D Drawings
 - Reports
 - NC & DXF Data
 - Layout Points
- Australian Standards