

2020



Short Courses

Shaft Alignment

COURSE CONTENT

This course will cover:

- Introduction to alignment of rotating shafts
- Causes of misalignments
- Types of misalignments such as angular misalignments
- Parallel misalignments and axial misalignments (end float)
- Shaft centreline relationship
- Correcting for shaft misalignment
- Pre-start checks before correcting any misalignments
- Reverse indicator alignment graphic analysis
- Face and rim alignment graphic analysis and across the flex element graphic analysis.
- Practical session with hands on exposure using laser alignment tool to align shafts

COURSE DURATION

12 hours

Option 1: 3 hours per day, 2 days per week totalling 2 weeks

Option 2: 6 hours per day for 2 consecutive days

For companies wishing to upskill employees course delivery can be tailored to your requirements, timetable and budget.

Balancing of Rotating Masses

COURSE CONTENT

This course will cover:

- Introduction to co-planer system of forces, force analysis
- Static and dynamic balancing
- Single and multi-plane balancing of rotating shafts
- Precision balancing
- Techniques using phase shift
- Balancing standards
- Balance quality grades for various groups of rigid rotors
- Practical session with hands on exposure using a balancing machine

COURSE DURATION

12 hours

Option 1: 3 hours per day, 2 days per week totalling 2 weeks

Option 2: 6 hours per day for 2 consecutive days

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AIME – Engineering Technical Training Experts

The Australian Institute of Maintenance Engineering (AIME) has been established to provide expert course technician level training for engineering tradespeople requiring the next level of training.

Based in a maintenance workshop it features access to the latest technical devices being used in maintenance workshops around Australia.

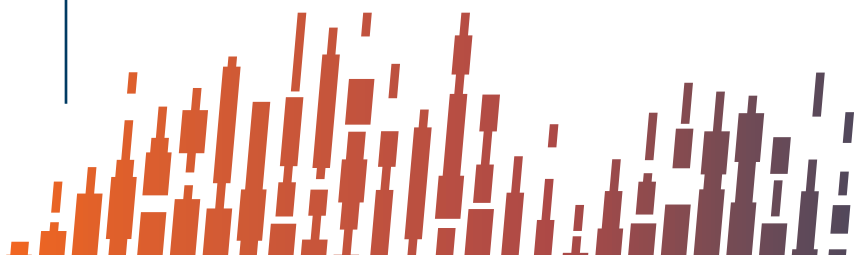
For more information on the courses available, please access our website at aime.wa.edu.au or to discuss your particular training requirements call us on +61 8 9399 6007.

aime.wa.edu.au

Your Qualified Trainer

AIME's lecturer is a qualified mechanical engineer with 10 years' of lecturing experience in engineering maintenance in TAFE.

As well he has extensive experience in the private sector with large engineering companies and a sound knowledge of maintenance engineering principles, processes and procedures, and has a background in maintenance centred design.



Equipment Condition Monitoring (*Vibration Monitoring*)

COURSE CONTENT

This course will cover:

- Understand the basics of vibration engineering and dynamics of vibration loads
- Online and offline monitoring of machines and equipment
- Primary and secondary signals (dynamic signals, tribological signals etc.)
- Different types of condition monitoring techniques
- Types of vibration measuring systems
- Carry out fixed plant condition monitoring through the implementation and use of vibration inspections.
- Vibration data collection and analysis
- Australian Standards for Vibration Monitoring - AS 2625 PART 1 SEVERITY GUIDELINES
- ISO General Standards for Vibration Severity (10816-1:1995)

COURSE DURATION

12 hours

Option 1: 3 hours per day, 2 days per week totalling 2 weeks

Option 2: 6 hours per day for 2 consecutive days

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Equipment Condition Monitoring (*Thermography*)

COURSE CONTENT

This course will cover:

- Thermography for machine condition monitoring
- Select the appropriate infrared thermography technique and understand it's limitations
- Setup and operate thermal imaging equipment for safe thermographic data collection
- Perform basic fault detection and severity assessment in accordance with established instructions
- Perform basic image post-processing
- Maintain a database of results and trends
- Verify the calibration of thermographic measurement systems
- Evaluate and report test results and highlight areas of concern
- Australian Standards AS ISO 18434.1:2014 Condition Monitoring and Diagnostics of Machines - Thermography General Procedures

COURSE DURATION

12 hours

Option 1: 3 hours per day, 2 days per week totalling 2 weeks

Option 2: 6 hours per day for 2 consecutive days

For companies wishing to upskill employees course delivery can be tailored to your requirements, timetable and budget.

ENROLMENT FORM

Shaft Alignment

Balancing of Rotating Masses

Equipment Condition Monitoring (*Vibration*)

Equipment Condition Monitoring (*Thermography*)

Company / Organisation:

Number of Students:

Preferred Course Date:

Address:

Contact Name:

Mobile / Telephone:

Email:

Send completed form (*scan or photo accepted*) to: info@aime.wa.edu.au

It's your career, aim high.

Australian Institute of Maintenance Engineering

13 Hensbrook Loop, Forrestdale Western Australia 6112

T +61 8 9399 6007 || F +61 8 9497 5003 || E info@aime.wa.edu.au

aime.wa.edu.au



2020

Short Courses

Industrial Mechatronics

Level 1

COURSE CONTENT

This course will cover:

- Introduction to micro-controllers
- Basic C language programming
- Standard library functions
- Data storage
- Displays
- IOT programming
- Project work

COURSE DURATION

15 Hours

3 hours per day, 1 day per week for 5 weeks

Level 2

COURSE CONTENT

This course will cover:

- Introduction to sensors
- Basics of temperature monitoring
- Temperature monitoring using micro-controllers
- Basics of vibration monitoring
- Vibration monitoring using micro-controllers

COURSE DURATION

15 Hours

3 hours per day, 1 day per week for 5 weeks

Level 3

COURSE CONTENT

This course will cover:

- Introduction to digital twin technology
- Building a digital twin of a physical asset
- Interfacing digital twin to a physical asset using micro-controllers
- Physical asset performance monitoring through its digital twin
- Introduction to machine learning and data analysis

COURSE DURATION

18 Hours

3 hours per day, 1 day per week for 6 weeks

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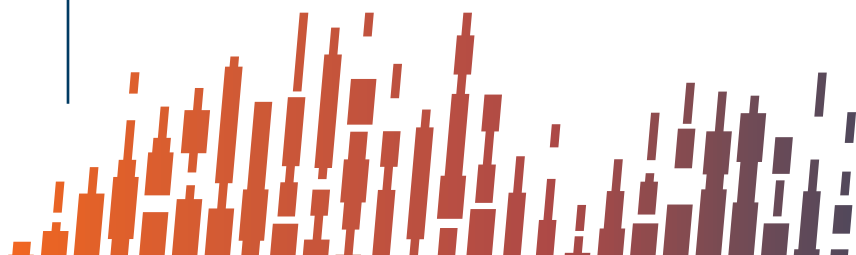
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Short Courses

Finite Element Analysis

Short Course for Individuals

A program designed for novice Mechanical Engineers aspiring to a career in design.

COURSE CONTENT

This course will cover:

- Discrete and continuous models. Boundary value problems, various discretization schemes. Finite element method and application of FEM
- Plane stress and plane strain conditions
- Classification of finite element types h and p-elements, mesh convergence
- Structural analysis - definition and types. Elements used in structural analysis. Different types of solution methods
- Structural static analysis, modal analysis, harmonic response analysis, transient dynamic analysis, spectrum analysis and impact analysis

- Thermal analysis - definitions and types, steady state and transient thermal analysis
- Non-linear analysis
- Solving real time problems using finite element analysis
- Project work

ELIGIBILITY

Diploma / Advance Diploma / Degree in Mechanical Engineering / CERT IV in Engineering with minimum 3 years of experience

COURSE DURATION

Flexible timing

5 weeks of classes, 40 hours total

Short Courses for Companies

This short course can also be run for companies that wish to upskill their engineering design employees.

For a course tailored to your precise needs and conducted to suit your timetable and budget please contact AIME via email info@aime.wa.edu.au or call us on +61 8 9399 6007

ENROLMENT FORM

Finite Element Analysis

Industrial Mechatronics Level 1 Level 2 Level 3

Company / Organisation:

Number of Students:

Preferred Course Date:

Address:

Contact Name:

Mobile / Telephone:

Email:

Send completed form (scan or photo accepted) to: info@aime.wa.edu.au

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