The exam 2020 onwards

Presented by Judith Ward, Director of Operations IRSE at the 2019 exam review session on 3 March 2020. See www.vimeo.com/irse for videos of all the sessions, including feedback on Modules 1 to 7
The exam 2020 onwards

• 2020 and 2021 arrangements
• “New look” exam (modules A to D)
• Module A
• Key dates for 2020
2020 and 2021 arrangements
2020 arrangements – Candidates can

EITHER sit module A

OR

up to four of modules 1-7
2020 arrangements

Candidates starting or completing* their exam journey

Either

Module A

No sponsor required

No IRSE membership required if starting exam journey

Candidates starting, continuing or completing their exam journey

or

Module 1

Module 2

Module 3

Module 4

Module 5

Module 6

Module 7

Sponsor required

IRSE membership required

* Completion of exam dependent on candidates' existing modules – see http://irse.info/exam
2021 arrangements

Candidates starting their exam journey
- No sponsor required
- No IRSE membership required if starting exam journey

Specimen questions for Module A and example papers for Modules B-D are already on the IRSE website

Module A
Module B
Module C
Module D

Candidates continuing/completing their exam journey
- Sponsorship requirements to be confirmed
- IRSE membership required for Modules B to D
  If you have passes in existing modules (1-7), check http://irse.info/exam
The “new look” exam

Certificate in Railway Control Engineering Fundamentals (aka Module A)

From 2020

From 2021

Advanced Diploma in Railway Control Engineering (aka the IRSE Professional Exam)
The “new look” exam

Encompasses broad knowledge of all

Module A fundamentals of railway control engineering

Module B railway safety and systems engineering

Module C principles of railway control and communication systems

Module D applications of railway control and communication systems

All four modules are compulsory to achieve the Advanced Diploma in Railway Control Engineering (aka the IRSE professional exam)

= modules 1 & 7

= modules 2 (part), 3 & 4

= modules 2 (part), 5 & 6
The “new look” exam remains…

• the high level that it always has been
• a “fast track” route to corporate membership of IRSE *
• a “top up” for approved qualifications to demonstrate knowledge and understanding for IEng / CEng *

* Experience and responsibility required
The “new look” exam...

Accepts “older” module passes (1-7) indefinitely – check www.irse.info/exam

IRSE Exam equivalents

This online application enables IRSE members who have already passed one or more of the older style IRSE Exam modules (1-7) to identify which additional new modules (A-D) they need to pass in order to be deemed to have passed the Exam as a whole.

Enter the Exam module numbers you have already passed (see examples at the bottom of this page) in the grey field to the right, and then click the SUBMIT button to see which new modules you need to take into order to pass the Exam as a whole:

You can enter a total of up to four modules in the field above, using the numbers 1-7 (corresponding to the old style Modules 1-7).

Some examples:
- If you have passed Module 1, you would enter 1.
- If you have passed Modules 2 and 3, you would enter 23.
- If you have passed Modules 4, 6 and 7, you would enter 467.
- If you have passed Modules 2, 3, 5, 6, you would enter 2356.

The order in which you list the Modules does not matter.

More information about the IRSE Exam is available on the IRSE website.
Module A

Fundamentals of railway control engineering
Certificate in Railway Control Engineering Fundamentals will be a qualification in its own right, suitable for those working with railway control systems staff and projects who would benefit from understanding underlying principles, issues and terminologies. Also suitable for those who current breadth and depth of knowledge would not enable them to pass remainder of the exam at that point.
Module A fundamentals of railway control engineering

Mandatory entrance* for those wishing to gain Advanced Diploma in Railway Control Engineering (aka the IRSE Professional Exam)

* for those starting their exam / advanced diploma journey in 2020/21 and onwards
Module A fundamentals of railway control engineering

“The aim of this module is to assess the students’ knowledge and understanding of the broad concepts and principles of railway signalling, telecommunications and systems engineering. This includes, the context within which railway signalling, telecommunications and systems engineers work including interfaces with other railway and non-railway systems and processes. It does not seek to assess in-depth knowledge of any of the subjects.”

New syllabus for the IRSE Professional Examination v3.0
Module A fundamentals of railway control engineering – learning objectives

• To understand…
  • Safe and reliable operation
  • Philosophy and high level principles
  • Safety engineering principles
  • Basic concepts of railway signalling and control systems
  • Functionality and potential limitations of equipment
  • Basic concepts of system lifecycle
  • Maintenance, inspection and testing
  • Fail safe hardware and high integrity software design
  • Governance of operating and changing a railway
  • Interfaces and interactions
  • Role of railway control and communications in other than control of train movement

• To be able to…
  • Demonstrate knowledge of the principles, applications and terminology of railway control and communications, its equipment and the interfaces and interactions with related systems

Questions will be set on all 11 learning objectives

It’s much more than “just signalling & telecoms (S&T)”
Module A fundamentals of railway control engineering – resources

- Talking to colleagues
- Technical visits
- Study groups
- IRSE local sections
- IRSE exam forum
- Younger members’ section
- Minor railways section

Module A: Fundamentals of railway control engineering

This event is aimed at all tracks who want to understand the basics of railway control engineering. The day will consist of a number of talks and demonstrations spanning telecommunications principles, cybersecurity, ETCS, and the role of railway telecommunications. This event is open to all, and will be a great opportunity to learn about the latest developments in this field. Booking essential via Eventbrite - irse.info/kids

Railway Engineers Forum

IRSE News

July/August 2019
Module A fundamentals of railway control engineering – the exam

- Computer based exam
- Facilitated in an exam room
- 50 questions (to be confirmed)
- 90 minutes
- “Practice exam” will be available to those signed up for familiarisation of exam software and style of questions
Key dates for 2020
## Key dates for 2020

<table>
<thead>
<tr>
<th>Module A</th>
<th>Modules 1 - 7</th>
</tr>
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<tbody>
<tr>
<td>Now</td>
<td>Now</td>
</tr>
<tr>
<td>11 March</td>
<td>Continue to study and talk to your sponsor</td>
</tr>
<tr>
<td>30 June</td>
<td>11 March SDF and guidance available</td>
</tr>
<tr>
<td>3 October</td>
<td>30 April Deadline for signed SDFs to be received by office</td>
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<tr>
<td></td>
<td>31 May Deadline for deferred signed SDFs to be received by office</td>
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<tr>
<td></td>
<td>30 June Online application closes</td>
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<td>3 October Exam day</td>
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Summary
Summary

- In 2020 you can either sit module A or one to four modules from 1-7
  - This can start, continue or finish your exam journey

- For 2020, online applications / SDFs will be available from 11 March, closing date for applications is 30 June
  - No exceptions to deadline dates

- From 2021, only modules A-D will be available
  - Passes in modules 1-7 remain valid, check www.irse.info/exam

- Check the IRSE website for exam resources
  - Not just the exam pages, look at local section meetings / technical visits, study days, knowledge base, IRSE News, etc etc

- Exam day is Saturday 3 October 2020