Technology Ireland ICT Skillnet

20 years 2006 - 2026

Iasa AI Architecture Master Class

IN-PERSON • 4 DAYS • CITA-A CERTIFICATION

www.ictskillnet.ie

IASA
The Business Technology Architect Association

Unleash your unstoppable potential, with Technology Ireland ICT Skillnet

Technology is ever-changing. No matter what stage you are at in business or your career, there is always more to learn.

At Technology Ireland ICT Skillnet, our vision is to create **progressive futures**, helping organisations to **transform at scale** and individuals to **develop a competitive edge**, through the **power of learning**.

For almost two decades, Ireland's leading technology companies have trusted us to build the critical skills needed to thrive in a rapidly evolving market.

Let us connect you to the infinite possibilities shaping the world of tomorrow.

Supercharged skills

Each of our programmes are designed, developed, and validated by specialists from academia and industry, working together, with a constant focus on:

1. **Creating opportunity and momentum** for experienced professionals and those starting out or transitioning career.
2. Delivering learning solutions in a way that **balances work and study**.
3. Providing practical skills, along with the theoretical, allowing businesses to **navigate new frontiers in the world of tech**.

6,000+
companies supported

14,000+
learners upskilled

30+
professional programmes

Online, blended, and
in-company training supports

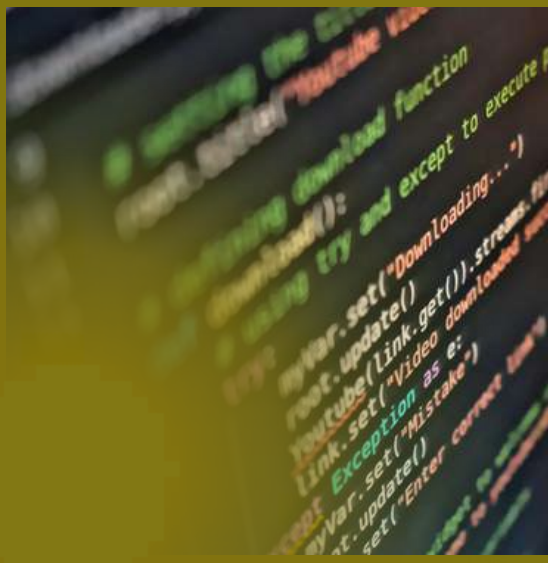
Government-subsidised
programme fees, up to 100%

CITA-A

Iasa AI Architecture Master Class

AI architecture training for enterprise software architects, solution architects and technology leaders

For software architects, solution architects and senior technology professionals, the challenge is no longer simply understanding AI as a concept. It is knowing how to design AI-enabled systems that are secure, scalable, resilient, governed and aligned to real business needs.

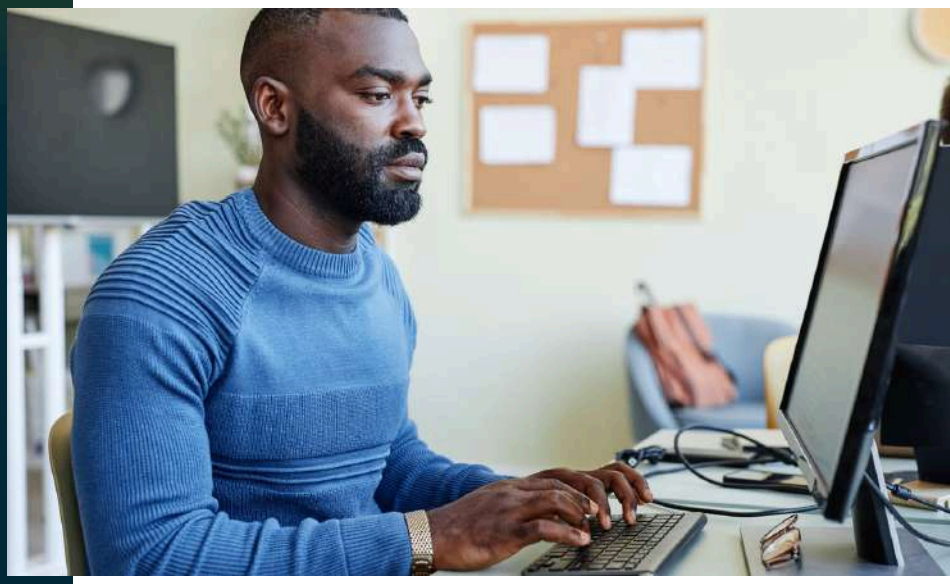


The Iasa AI Architecture Master Class [CITA-A] is a practical and technical programme designed for professionals who want to strengthen their ability to architect AI solutions with confidence. The course explores the principles, patterns, tools and practices needed to move from traditional software and solution architecture into the emerging world of artificial intelligence architecture.

Participants will examine key areas including AI foundations, prompt engineering, AI software architecture, LLMOps, AI governance, agentic AI, MCP, A2A, data management and quality attributes. The programme also uses case study work, facilitated discussion and applied architecture exercises to help learners connect the theory to real project environments.

Developed by architects, with architects and for architects, this course supports professionals who want to build AI-first architectural thinking and progress towards the globally recognised CITA-A Certified IT Architect certification pathway.

This Technology Ireland ICT Skillnet programme is cofunded by the Government of Ireland and the European Union.



At a glance

Start Date
Visit the course webpage to view the next start date

Award
CITA-A Industry Certification

Delivery
In-person

Duration
4 days, 9am-5pm

Fees
Full non-subsidised course fees are €2,000. Please enquire with our team about access to Technology Ireland ICT Skillnet part-funded course fees.

Programme Partner
Iasa Ireland
(Irish Chapter of Iasa Global)

Course Delivery and Teaching Style

This course is delivered through instructor-led sessions, facilitated peer discussion, applied group work and practical architecture exercises. Participants will use collaborative tools such as Miro and Microsoft Teams to complete classwork, access course materials and develop architecture outputs.

The course emphasises immersive, hands-on application. Each section utilises Canvas and Cards (such as Architecture Definition, SWOT, PESTEL, and Business Model Canvases) to ground theory into practical workspaces. Students must also ensure their devices can access Miro (for diagramming), MS Teams (for collaboration), and Chronus (for mentoring).

Learners should expect to complete practical exercises between sessions. The programme includes workshop-based learning and final presentation activity, helping participants apply the tools, techniques and architecture concepts to either a provided case study or their own professional project context.

Course Content & Delivery

The programme is structured around practical AI architecture topics, moving from foundational concepts through to governance, operations, agentic systems, data readiness and final applied presentations.

The curriculum consists of an introduction followed by 14x modules and a closeout session:

Module 01
AI Foundation

Lecture Topics:
- Introduction to AI
- Impact of AI on business
- Architectural overview
- Understanding AI Topics

Peer Discussion: Architectural use of patterns and how the IASA repository matches and can be utilised.

Module 02
AI Foundation Continuation

Lecture Topics:
- Selecting a model
- Interacting with Data
- Agentic AI introduction
- Software Engineering with AI

Peer Discussion: Trade-offs, requirements for AI, and using an existing model vs. creating your own model.

Module 03
Prompt Engineering

Lecture Topics:
- Prompt Engineering
- Prompt Frameworks
- Grounding
- RAG

Peer Discussion: Prompt engineering activities, how frameworks benefit interactions with models, and using your own data.

Module 04
AI Software Architecture

Lecture Topics:
- Software architectures used with AI
- Capabilities of AI
- Viewpoints in AI design

Peer Discussion: AI capabilities and model types, skills/knowledge needed across different team roles, and the hype cycle's impact on the industry.

Module 05
LLMOps

Lecture Topics:
- Understanding LLMOps
- The LLMOps lifecycle
- Describing evaluations
- Monitoring and automation

Peer Discussion: Similarities and differences between DevOps and LLMOps, changes in the LLMOps lifecycle, why evaluations are needed, and automation in solutions.

Module 06
AI Governance

Lecture Topics:
- Outline AI Governance
- Governance principles
- Model governance
- Operations governance

Peer Discussion: Creating AI Governance, differences between existing governance and AI governance requirements, and creating your own governance model.

Module 07
Agents and Agentic AI

Lecture Topics:
- Agent AI patterns
- Importance of Domain Driven Design (DDD) in Agentic AI
- Risks and safeguards

Peer Discussion: Agentic AI compared with other AI patterns, DDD benefits, risks, and safeguards.

Module 08
Agents and MCP

Lecture Topics:
- Current challenges
- Understanding MCP (Model Context Protocol)
- Limitations with MCP
- MCP Security
- AI Gateway services

Peer Discussion: Challenges that brought about MCP, performance topics, and MCP security.

Module 09
Agents and A2A

Lecture Topics:
- Understanding A2A (Agent-to-Agent)
- Implementation and use of A2A
- A2A security

Peer Discussion: Where and when to use A2A, differences between A2A and MCP, and A2A security.

Module 10
Agent Versioning

Lecture Topics:
- Agent versioning
- Causes of versioning activities
- Agentic behaviors
- Versioning strategies and recommendations

Peer Discussion: Agent versioning techniques, versioning events, agentic behaviors, and versioning strategies.

Module 11
Data Management

Lecture Topics:
- Legacy data challenges
- Creating a trusted data foundation
- Data estate architecture and transformation
- Structured vs. unstructured data
- Data readiness

Peer Discussion: Legacy data processes/technologies, data estate architecture uses, transformations, trade-offs, and data readiness activities.

Module 12
Quality Attributes

Lecture Topics:
- Quality attribute topics
- Requiring attributes for an AI implementation
- Performance and operations requirements
- Application layer architecture

Peer Discussion: Reliability, security, cost optimisation, operational excellence, performance, observability, and monitoring implementation guidelines.

Module 13
Case Study

Lecture Topics:
- Presentation of the case study
- How ML and AI were utilised, real-world privacy
- Competitor implementation review

Peer Discussion: How AI was used in both scenarios, technologies and their implementation, and bringing all course topics together.

Module 14
Final Presentations

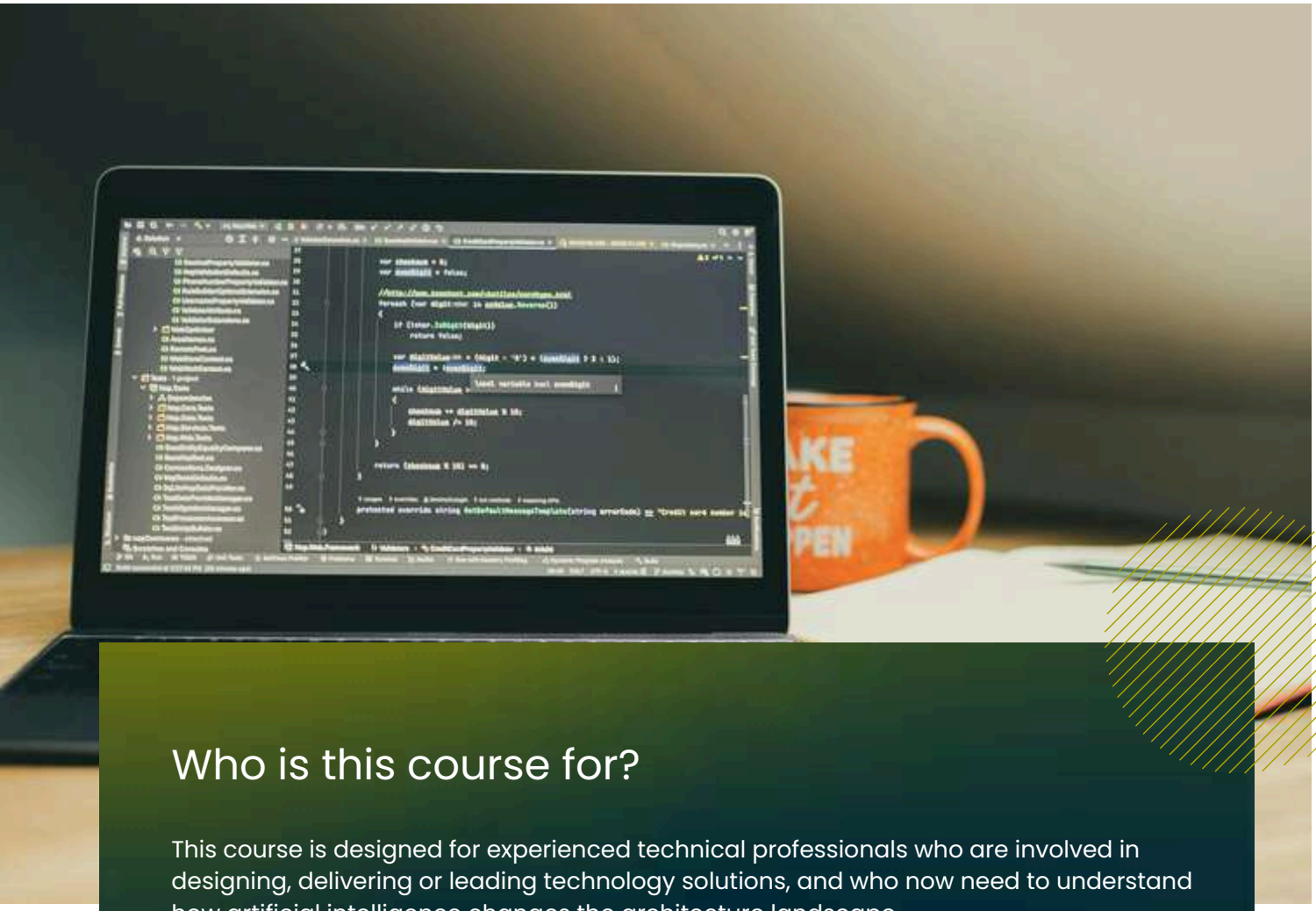
Lecture Topics:
- Review of material
- Review of student design cards
- Wrap-up discussion

Peer Discussion: Design implications and impacts when creating an AI solution.

Closeout Module

Lecture Topics:
- Review of covered topics
- Discussing next steps in your learning path

Peer Discussion: Final course review and discussion on interactive activities.



Who is this course for?

This course is designed for experienced technical professionals who are involved in designing, delivering or leading technology solutions, and who now need to understand how artificial intelligence changes the architecture landscape.

Ideal candidates for the course are:

- Software Developers & New Software Architects: Those who have completed large feature sets on 1-5 projects in at least one modern development environment and have participated in design, agile, and DevOps processes.
- Non-Coding Software Practitioners: Individuals with experience performing solution or enterprise architecture and at least one technical specialty (infrastructure, software, information, security). These professionals should also have exposure to at least one modern development environment.
- Technology Leaders: Technology leaders may also benefit from the programme, particularly CTOs, CISOs, DevOps leaders, programme managers, project managers and senior technical decision-makers who need to understand the architectural implications of AI adoption across products, teams and organisations.

This course requires general familiarity with development tools, design, agile, and DevOps processes. You should have basic knowledge and experience of system development and AI. The course does not teach how to code.

Outcomes for you

On completion of this course, participants will have developed practical skills and architectural understanding that can be applied directly to AI-enabled projects and digital transformation initiatives.

Design AI-enabled architectures that align technology choices with business goals, product needs and customer value.

Understand LLMOps practices across evaluation, monitoring, automation, lifecycle management and operational readiness.

Assess AI models, data requirements and trade-offs to make informed AI solution design decisions.

Build governance-aware AI solutions that address security, risk, privacy, model oversight and responsible adoption.

Apply prompt engineering, grounding and RAG principles to improve AI interactions with enterprise data.

Architect agentic AI systems using agent patterns, MCP, A2A, versioning, safeguards and quality attributes.

Award: Iasa CITA-A Certification

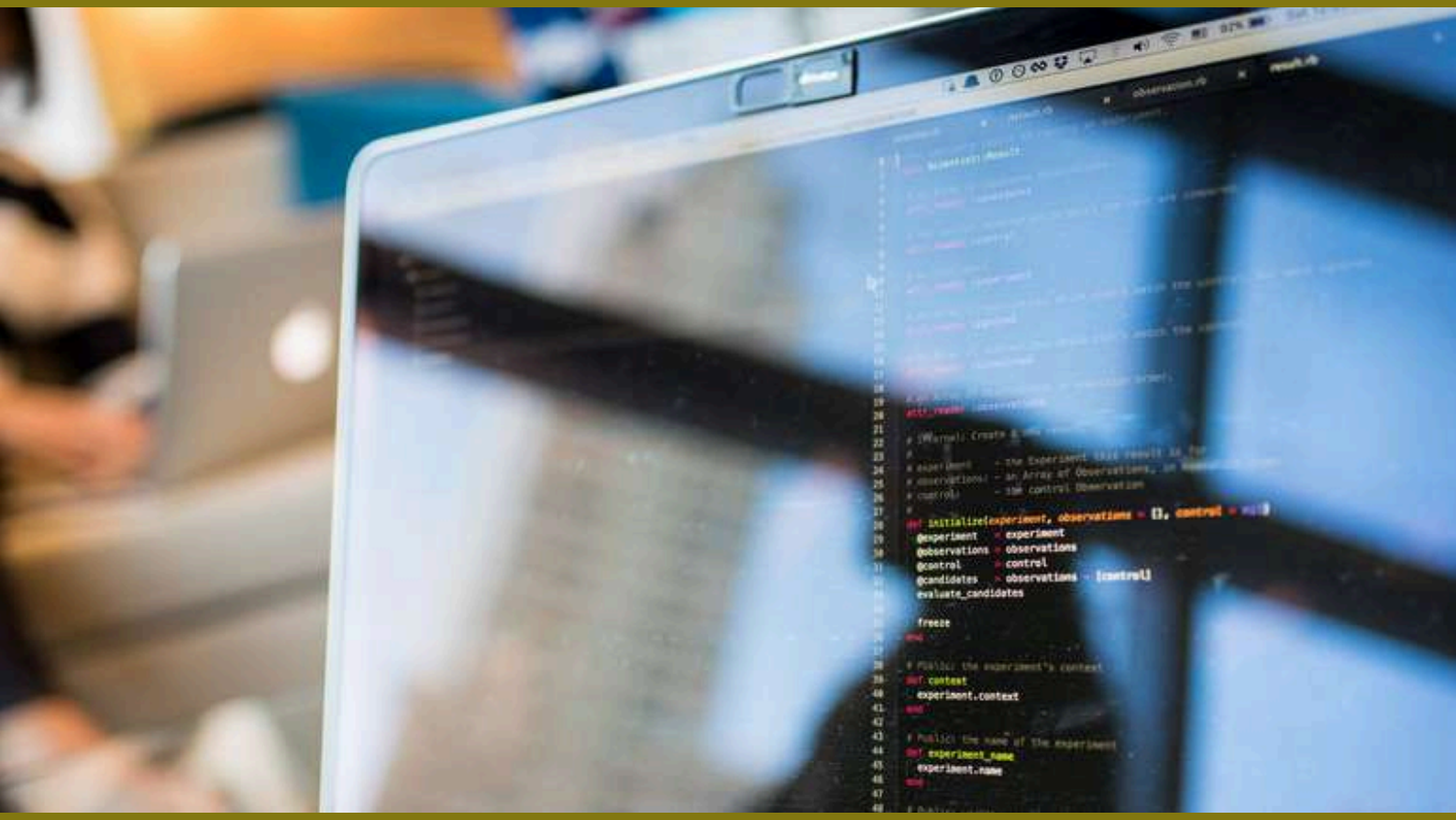
The Iasa CITA-A (Certified Information Technology Architect - Associate) is a globally recognised, vendor-independent certification for mid-career architects focusing on specialised domains, including solution, software, and AI architecture. It proves your competency in applying the ITABoK (Information Technology Architecture Body of Knowledge) to complex real-world scenarios.

Funding eligibility

The fees for this programme are part-funded by Technology Ireland ICT Skillnet. Please make an enquiry to speak to our team about access to funded course fees.

Applicants must be employed by, or operating as, an eligible business engaged in economic activity in the Republic of Ireland. This includes private companies, sole traders, commercial social enterprises and eligible commercial semi-state organisations. Additional eligibility verification may be required for certain organisation types to avail of grant-aided fees.

Applicants who do not meet our funding criteria may in some cases be able to apply directly with Iasa Ireland and pay the full fee if there are available places.



Please speak with our programme team to learn more about the availability of funding.

info@**ictskillnet**.ie

Programme delivered in partnership with:

The Business Technology Architect Association

Iasa Ireland is a member of Iasa, a global association with over 60,000 members worldwide and is the Irish association representing IT architects at all levels. Iasa promotes the IT architecture profession through the advancement of best practices and education, and the delivery of programmes and services to IT architects of all levels.

Iasa Ireland is a not for profit association led by a team of volunteers who are practising technology architects in companies such as Irish Life, Bearingpoint, Eirgrid and Bank of America Merrill Lynch. The mission of Iasa Ireland is to make IT architecture a recognised and valued profession through the advancement of best practices and education and by delivering programmes and services to IT architects of all levels.

Ready to develop your career in Technology Architecture?

Our team is ready to answer any questions you might have regarding this programme. Send an email to info@ictskillnet.ie or use the enquiry form on our programme page and one of our programme leads will be delighted to assist you.

Start your learning journey today with Technology Ireland ICT Skillnet by clicking on the Learn More button.

Learn More

Embrace the future with confidence, with Technology Ireland ICT Skillnet as your training partner.

Technology Ireland ICT Skillnet

Programme pillars

Our wide range of programme channels allows you to access training in the latest technologies driving business development.

- Artificial Intelligence
- Cloud
- Cybersecurity
- Data Analytics
- Innovation & Transformation
- Leadership
- Quantum
- Software Architecture
- Software Development

Industry approved

With the support of our Industry Steering Group, made up of some of Ireland's most progressive companies, you can be assured that our programmes will provide you with the most relevant and cutting-edge skills that industry demands.

Fidelity Investments, Hertz, Liberty Information Technology, Ericsson, IBM, Cisco, hp, Technology Ireland Ibec

Certification you can trust

Through our strategic partnerships with some of Ireland's most influential higher education institutions, we offer a range of certificate, diploma, and masters programmes, with awards accredited on the National Framework of Qualifications.

TU Dublin, Atlantic Technological University, MTU, DCU, Maynooth University, University of Limerick, National College of Ireland, University of Galway, TUS, UCD Dublin

Join 14,000+ learners who have transformed their careers with us. **Explore our range of courses ›**

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Technology Ireland ICT Skillnet

UNLEASH YOUR
UNSTOPPABLE POTENTIAL

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Government of Ireland

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