ITS Computational Thinking

Category: Software Development & Programming | **Vendor:** Pearson

Duration: 8.00 hours (1 days) **6.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	Mentored
Certification:	ITS Computational Thinking
Related Exam:	ITS-CT

Course Overview

The IT Specialist Computational Thinking course focuses on knowledge needed to describe data storage bits and their storage representing information in bit patterns data and programming data manipulation arithmetic/logic programming data manipulation algorithms the concept of an algorithm algorithm representation algorithm discovery iterative structures recursive structures efficiency and correctness programming languages historical perspective of programming languages traditional programming concepts procedural units object-oriented programming software engineering the software engineering discipline the software life cycle software engineering methodologies modularity tools of the trade quality assurance documentation the human-machine interface data abstractions basic data structures related concepts customized data types classes and objects abstract models database systems database fundamentals the relational model object-oriented databases traditional file structures data mining social impact of database technology artificial intelligence intelligence and machines perception reasoning theory of computation functions and their computation Turing machines universal programming languages a non-computable function and complexity of problems. Designed for professionals in bothnon-technical or technical roles, this course focuses on the critical thinking and decision-making skills needed for success at the IT Specialist level. The goal of this course is to provide you with all the tools you need to prepare for the IT Specialist Computational Thinking exam to increase your chances of passing the exam on your first try.

About This Course

The IT Specialist Computational Thinking course focuses on knowledge needed to describe data storage bits and their storage representing information in bit patterns data and programming data manipulation arithmetic/logic programming data manipulation algorithms the concept of an algorithm algorithm representation algorithm discovery iterative structures recursive structures efficiency and correctness programming languages historical perspective of programming languages traditional programming concepts procedural units object-oriented programming software engineering the software engineering discipline the software life cycle software engineering methodologies modularity tools of the trade quality assurance documentation the human-machine interface data abstractions basic data structures related concepts customized data types classes and objects abstract models database systems database fundamentals the relational model object-oriented databases traditional file structures data mining social impact of database technology artificial intelligence intelligence and machines perception reasoning theory of computation functions and their computation Turing machines universal programming languages a non-computable function and complexity of problems. Designed for professionals in bothnon-technical or technical roles, this course focuses on the critical thinking and decision-making skills needed for success at the IT Specialist level. The goal of this course is to provide you with all the tools you need to prepare for the IT Specialist Computational Thinking exam to increase your chances of passing the exam on your first try.

Who Should Attend

Participants who are ready to demonstrate their understanding of computational thinking, including decomposing problems, collecting, and analyzing data, recognizing patterns in data, representing data through abstractions, and automating solutions through algorithmic thinking.

Prerequisites & Entry Requirements

General Prerequisites:

0-1 years of experience working in the field. Limited to no experience with computational thinking concepts.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Upon successful completion of this course, students should be able to:Describe Data Storage. Describe Data Manipulation. Describe Algorithms. Describe Programming Languages. Describe Software Engineering. Describe Data Abstractions. Describe Database Systems. Describe Artificial Intelligence. Describe the Theory of Computation.

Detailed Course Outline

Upon successful completion of this course, students should be able to:

- Describe Data Storage.
- Describe Data Manipulation.
- Describe Algorithms.
- Describe Programming Languages.
- Describe Software Engineering.
- Describe Data Abstractions.

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Required course materials

Pearson CertPREP IT Specialist Computational Thinking Courseware.

Training outline

Chapter 1: Data Storage

- 1.1 Bits and their Storage.
- 1.4 Representing Information as Bit patterns.
- 1.8 Data and Programming.

Chapter 2: Data Storage

- 2.4 Arithmetic/Logic.
- 2.6 Programming Data Manipulation.

Chapter 5: Algorithms

- 5.1 The Concept of an Algorithm.
- 5.2 Algorithm Representation.
- 5.3 Algorithm Discovery.
- 5.4 Iterative Structures.
- 5.5 Recursive Structures.
- 5.6 Efficiency and Correctness.

Chapter 6: Programming Languages

- 6.1 Historical Perspective.
- 6.2 Traditional Programming Concepts.
- 6.3 Procedural Units.
- 6.5 Object-Oriented Programming.

Chapter 7: Software Engineering

- 7.1 The Software Engineering Discipline.
- 7.2 The Software Life Cycle.
- 7.3 Software Engineering Methodologies.
- 7.4 Modularity.
- 7.5 Tools of the Trade.
- 7.6 Quality Assurance.
- 7.7 Documentation.
- 7.8 The Human-Machine Interface.

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Chapter 8: Data Abstractions

- 8.1 Basic Data Structures.
- 8.2 Related Concepts.
- 8.5 Customized Data Types.
- 8.6 Classes and Objects.
- 8.7 Abstract Models.

Chapter 9: Database Systems

- 9.1 Database Fundamentals.
- 9.2 The Relational Model.
- 9.3 Object-Oriented Databases.
- 9.5 Traditional File Structures.
- 9.6 Data Mining.
- 9.7 Social Impact of Database Technology.

Chapter 11: Artificial Intelligence

- 11.1 Intelligence and Machines.
- 11.2 Perception.
- 11.3 Reasoning.

Chapter 12: Theory of Computation

- 12.1 Functions and their Computation.
- 12.2 Turing Machines.
- 12.3 Universal Programming Languages.
- 12.4 A Non-computable Function.
- 12.5 Complexity of Problems.

□□ Certification Path

ITS Computational Thinking

Exam: ITS-CT

Additional Course Details

Nexus Humans ITS Computational Thinking training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the ITS Computational Thinking course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for ITS Computational Thinking?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The ITS Computational Thinking course helps prepare you for the ITS Computational Thinking certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the ITS-CT official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 1-day ITS Computational Thinking course provides up to 6.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the ITS Computational Thinking training?

The training takes place over 1 day(s), with each day lasting approximately 8.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for ITS Computational Thinking?

Yes, we provide corporate training, dedicated training, and closed classes for ITS Computational Thinking. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for ITS Computational Thinking?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your ITS Computational Thinking training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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