





LEAVING CERTIFICATE  
COMPUTER SCIENCE

## MOOCs / Online Resources 1

Course Name	Course Outline	Link to Course
<p><i>CS50: Introduction to Computer Science</i></p> 	<p>This is CS50, Harvard University's Introduction to Computer Science. This course teaches you how to think algorithmically and solve problems efficiently. Topics include abstraction, algorithms, data structures, encapsulation, resource management, security, software engineering, and web development. Languages include C, Python, SQL, and JavaScript plus CSS and HTML.</p>	<p><a href="https://www.youtube.com/watch?v=y62zi9ozPOM&amp;%20%20index=1&amp;list=PLhQjrBD2T3828ZVcVzEIhsHVgjANGZveu">https://www.youtube.com/watch?v=y62zi9ozPOM&amp;%20%20index=1&amp;list=PLhQjrBD2T3828ZVcVzEIhsHVgjANGZveu</a> (Video lectures)</p> <p>or</p> <p><a href="https://www.edx.org/course/cs50s-introduction-computer-science-harvardx-cs50x">https://www.edx.org/course/cs50s-introduction-computer-science-harvardx-cs50x</a> (For the full course including the projects which will take longer to complete than just the video lectures above)</p>




LEAVING CERTIFICATE  
COMPUTER SCIENCE

Course Name	Course Outline	Link to Course
<p data-bbox="142 565 611 634"><i>Computational Thinking for Problem Solving</i></p> 	<p data-bbox="732 565 1339 998">In this course, you will learn about the pillars of computational thinking, how computer scientists develop and analyse algorithms, and how solutions can be realized on a computer using the Python programming language. By the end of the course, you will be able to develop an algorithm and express it to the computer by writing a simple Python program.</p>	<p data-bbox="1383 581 1932 641"><a href="https://www.coursera.org/learn/computational-thinking-problem-solving">https://www.coursera.org/learn/computational-thinking-problem-solving</a></p>



LEAVING CERTIFICATE  
COMPUTER SCIENCE

Course Name	Course Outline	Link to Course
<p><i>Introduction to Python: Absolute Beginner</i></p> 	<p>This hands-on course gives an in-depth look at the details of Python layers and concepts. Get ample practice drills and projects, using Jupyter Notebooks on Azure, which require only a browser and an Internet connection.</p> <p>After you explore data types and variables, take a look at strings, input, testing, and formatting. From there, learn about arguments and parameters, along with conditionals and nested conditionals.</p>	<p><a href="https://www.edx.org/course/introduction-python-absolute-beginner-microsoft-dev236x-1">https://www.edx.org/course/introduction-python-absolute-beginner-microsoft-dev236x-1</a></p>

*Terms of Use - These MOOCs / Online Resources refers or links to external organisations or websites over which PDST has no control and accepts no responsibility. Any references or links to external organisations or websites are provided as a matter of convenience only.*