





LEAVING CERTIFICATE
COMPUTER SCIENCE

MOOCs / Online Resources 1

Course Name	Course Outline	Link to Course
<p><i>Computational Thinking for Educators</i></p> 	<p>The goal of this course is to help educators learn about computational thinking (CT) and how it can be integrated into a variety of subject areas. The course is divided into five units:</p> <ul style="list-style-type: none">• Introducing Computational Thinking: What is CT?• Exploring Algorithms• Finding Patterns• Developing Algorithms• Final Project: Applying Computational Thinking	<p>https://computationalthinkingcourse.withgoogle.com</p>




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Course Name	Course Outline	Link to Course
<p><i>CS50: Introduction to Computer Science</i></p> <p>THIS IS CS50</p>  <p>HARVARD UNIVERSITY</p>	<p>This is CS50, Harvard University's Introduction to Computer Science.</p> <p>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>https://www.youtube.com/watch?v=y62zj9ozPOM&%20%20index=1&list=PLhQjrBD2T3828ZVcVzEIhsHVgjANGZveu (Video lectures)</p> <p>or</p> <p>https://www.edx.org/course/cs50s-introduction-computer-science-harvardx-cs50x (For the full course including the projects which will take longer to complete than just the video lectures above)</p>



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Course Name	Course Outline	Link to Course
<p data-bbox="128 654 674 686"><i>Introduction to Python: Absolute Beginner</i></p> 	<p data-bbox="772 654 1430 886">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 data-bbox="772 919 1423 1101">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 data-bbox="1499 639 1932 719">https://www.edx.org/course/introduction-python-absolute-beginner-microsoft-dev236x-1</p>

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