



# St Benedict's Catholic School

*Developing Wisdom, Compassion and Resilience  
through Prayer and Work*

## Computer Science Department Curriculum Guide

### Year 11

#### Curriculum

Autumn	Spring	Summer
<ul style="list-style-type: none"> <li>• Designing Algorithms               <ul style="list-style-type: none"> <li>○ Flowcharts</li> <li>○ Trace Tables</li> <li>○ SQL</li> </ul> </li> <li>• Impacts of Technology               <ul style="list-style-type: none"> <li>○ Legislation</li> <li>○ Self-Driving Cars</li> <li>○ Online Shopping</li> <li>○ AI</li> <li>○ Health</li> <li>○ Drones</li> </ul> </li> <li>• Targeted Revision (Theory)               <ul style="list-style-type: none"> <li>○ Binary</li> <li>○ Hexadecimal</li> <li>○ Binary Addition</li> <li>○ Binary Shift</li> <li>○ The CPU</li> <li>○ Primary Memory</li> <li>○ Secondary Storage</li> <li>○ Data Representation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Programming Fundamentals               <ul style="list-style-type: none"> <li>○ Python programming challenges</li> </ul> </li> <li>• Defensive Design               <ul style="list-style-type: none"> <li>○ Validation</li> <li>○ Authentication</li> <li>○ Maintainability</li> <li>○ Types of Error</li> <li>○ Test Data</li> </ul> </li> <li>• Security Threats               <ul style="list-style-type: none"> <li>○ Human Error</li> <li>○ Social Engineering</li> <li>○ Malware</li> <li>○ Pen Testing</li> <li>○ External Attacks</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Targeted Revision (Prog)               <ul style="list-style-type: none"> <li>○ Series of practice exam questions</li> </ul> </li> <li>• Final Revision               <ul style="list-style-type: none"> <li>○ Free revision time by students with teacher support</li> </ul> </li> </ul>

#### Assessment & Homework

*Students will be assessed at the end of each topic. They will also sit their Year 11 mock papers.*

*Each assessment will be completed on paper during the lesson. End of topic assessments cover 75% current topic and 25% previous topics from the same paper.*

*Student's **forecast** grade at the end of the year will be based on their **average** grade across all assessments taken to that point and the teacher's holistic view of the student.*

*Students will receive **one** piece of homework each week.*

*To complete any remaining work from the lesson task, to check their answers against the provided answer slides, to complete the work for any lessons they missed.*

*When an assessment is upcoming, the homework will be to revise.*

#### Resources

*Students will have a section in their OneNote called "Revising for Assessments".*

*There are two separate tabs for the theory elements and the practical programming elements.*

#### Extra and Super Curricular Opportunities

*Coding Ambassador – can apply to lead Coding Club for Years 7 and 8.*

*Revision Club – weekly sessions to recap topics covered earlier in the course.*