

Study Pack

Computing

Future Careers

IT Support Technician
Earning potential: £16K-£35K

App Developer
Earning potential: £21K-£55K

Software Developer
Earning potential: £20K-£70K

Source:
National Careers
Service

Computing Pre-Induction Activity





Alison Hughes

Hi, I'm Alison and I am the Curriculum Development Manager for the Computing Department. I am also the Course Co-ordinator for the Level 2 ICT programme at College; I usually teach on the spreadsheet and database development units as well as the e-portfolio unit on this course. One of the best parts of my job means that I tend to be a regular visitor to all of our computing and ICT classes - I want to make sure you are making good progress on your course. I am also one of the people who you can speak to if you are having any issues during your course and I am always happy to do my best to make sure your time with us a Wakefield College is happy and successful!



John Handlovics

Hello, I am John and I am the Course Leader for Level 3-year 1 Computing and Course Leader for Level 1 Business. Wakefield College has been at the heart of my teaching at for 20 years and I am easy to spot around the department (usually without shoes). I enjoy the prospect of opening new areas and ideas for my students. Practical hands on solutions to problems are skills attained over time, I'm quite old now (but still have hair).



John Kelly

Hi, I'm John and I'm the Course Co-ordinator for Entry Level 3 Vocational Studies. I currently teach on E3 Vocational Studies, Level 1 ICT and Level 2 Business Studies. I have taught at the College for twenty years and in that time, I have taught qualifications from Entry 3 to Level 3 to students aged 14 to adults in College and the community. I have also provided bespoke training for businesses and their staff. I enjoy working with disadvantaged students and get immense satisfaction from seeing them progress from College to employment and a bright future!



MJ Mountain

I teach Computer Science across a range of levels including level 2, level 3, and Higher Education. My specialisms include web development, software development and artificial intelligence. I'm currently halfway through a master's degree in Computer Science building upon topics such as Networking, Computer Architecture, Algorithms, and Data Structures and Cybersecurity. I help students by thinking of new and innovative ways to develop an understanding of the key topics taught, for example, tasks that students would be asked to do within the workplace.



Paul Schofield

Hi, I'm Paul and I teach on the Level 2 & 3 IT courses. At level 2 I have worked across different units but at level 3 I spend a lot of time working with databases, spreadsheets and project management. More recently I have spent time developing students' IT skills to suit their future careers, either through UCAS and university or gaining apprenticeships. When not in class I like to try out different software and find alternative ways of doing things, I'm currently working on developing online materials and video tutorials to support your learning!



Paul Smith

Hello, I am Paul and the Course Leader for Level 3 Web Development, along with anything web related from level 2 to level 5 in Computing. You can also find me on the Level 2 Computing course teaching the Hardware unit, where we learn how to strip down and rebuild a PC. In 2019 I was a guest speaker at the University of Arts London, presenting a talk on how a colleague and I developed the Level 2 Games course. In my spare time I like to play darts (badly), socialise with friends and family and generally look for new software to play with and learn. Anything that will make your life easier!



Tracey Akeroyd

Hi, I'm Tracey and I am the Course Co-ordinator for Level 1 Computing. I currently teach on the Level 1 ICT course here at Wakefield College and like a challenge when it comes to trying new software programmes and different ways to make your course more enjoyable. I have in past years taught students of all ages and also worked as an Online Tutor teaching Levels 1, 2 and 3. Prior to this I was a Senior Travel Consultant for a Travel Agency! I enjoy doing lots of other things in my spare time: watching sport, eating out and travelling are some of my favourites. I am also quietly competitive in most things I try, currently I am on a mission to be able to run 5k without having to stop at all, I am working towards this very slowly!

Welcome to the Computing Department at Wakefield College!

Our Computing courses are designed to help students who wish to pursue a career in the field of emerging technologies, computer hardware and software development. A wide range of skills are developed across all levels of study, from Level 1 to Level 3. The Computing pathway prepares our students for future employment, in roles such as **systems and data analysts, computer technicians, programmers, network administrators, database administrators** and **more!** You will be able to sharpen your skills while building and repairing computers, as well as building networks!

We have developed a few activities to give you a brief look at the kind of things you will be studying within the courses at Levels 1, 2 & 3. Complete each activity with as much detail as you can. It doesn't matter if you don't feel you have enough knowledge – just have a go at the tasks, this is how you learn!

We look forward to welcoming you to our College in September for the start of an exciting new year.

The *Computing* Team

Activity 1: How Well Do You Know the Hardware in Your PC?

- A. Look at the image below and add as much detail as you can to each box to explain what you know about each component. **Can you name each component, and can you say what their functions are?**



| | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. [Your answer here] | 2. [Your answer here] | 3. [Your answer here] | 4. [Your answer here] |
| 5. [Your answer here] | 6. [Your answer here] | 7. [Your answer here] | 8. [Your answer here] |

Activity 2: Recognising Web Language

Web development employs its own language and terminology. It's important you're able to broaden your understanding of these key terms, and gain confidence in using this language on the course. **Can you identify these terms that relate to web development?**

| ANAGRAM | YOUR ANSWER | DEFINITION OF WORD |
|---------------|-------------|---|
| vontaigain | | Getting around the Internet |
| fwmrieare | | The design of your website is built in one of these |
| sure yirfneld | | This describes how easy your website is to use |
| debdmede | | Another name for placing an object into your website |
| lmht | | The type of code that the website is written in |
| cetrstuur | | Another way to describe the layout of your web page |
| unme | | A list of items |
| Kpnyerhil | | An automatic web route to another page |
| Errdne | | A word to describe how code is changed to make a web page viewable. |
| uaimtdime | | Different forms of interactive content |
| worerbs | | A computer program for displaying HTML files |



Activity 3: HTML Puzzle

Continuing the web language and terminology theme, can you find all the words relating to 'HTML' language within this puzzle?

U Y W
T P F H Y Q R Z Y
T N H I W C P Q L R W Y U
L C W W D G A D Q R P Z P M Z Y X
W X I N U O S R O T C E L E S T U R S
R Z O D I E C B B K W H E Z B R X R N T S
N L V R D A W S X V C Y H T Y U O K Q T O
S I G U R D J X G X J G G L H S D
B G B E I N H A R D A W V D F K W
U Z X S N T L H G S T Y L E S H E B E T T Y Y N G W
I B U G S Y U K P P Z R P R E N V S O L N E I W X
B Z S Q Z D O B Z I J Q O Q V T C O L R R H L I K
Q K J A V A S C R I P T O T U C A T I D X Q T I D I C
K T Z K G T P J U P R T F Y B F E T S J M R M S S B J
G C G C W I U Z T I T T E S V D P N X N P N L O E H L
V V H H J K D T C T T Q T H Z I R W X T K E C
X V K L X Y L R U H A J D W L Q Z C X V B
C L X C C U U L J X U J Y D O N V A E C L
O N M Y T K D Z H B
X P N K G R D E M D N N
T N E M E L E V T W X K L S W H C U Y C R
S Y X H C K D Z W Y B W X Q I I W Y L N X
T P B Y O P T U T L W E V M B C Y C Q
E D Y I G T O U H U C A P P A P K
I F A Y Q G Y S L L V H F
O P Y A Y E D C T
M Z Y

ATTRIBUTE

CASCADING

ELEMENT

HEXADECIMAL

HTML

HTTP

JAVASCRIPT

LINKS

ROOT

SELECTORS

STYLESHEET

TAG

Activity 4: The Uses & Features of Websites

“ There are roughly 200 million active websites on the internet, but they’re not all perfect!



Websites are created for many different purposes and they often share many similar features. Some of them certainly work better than others! Finding out what works well and adopting the best practice, is key to being a successful Web Designer.

On some of our Computing courses at Wakefield College you will practise designing, creating and analysing websites. You will learn many of the essential skills to help you become a great Website Designer in the future.

Your Website Challenge:

Have a look at the tasks below and see how far you can go.

Find two very different websites on the internet which you can compare and fill in the boxes below:
(Name each website and then, if you can, show a screen shot of one of the pages)

Name of Website:

Name of Website:

Screenshot:

Screenshot:

Can you answer these 3 very important questions about each of the websites you have chosen?

- a) What Type of website is it? *(Educational, Retail, Charity, Informative, etc)*
- b) What is the Purpose of the website? *(What is the website trying to do?)*
- c) Who is the Target audience? *(Who is the website aimed at?)*

a)

a)

b)

b)

c)

c)

Tick if the Websites have any of these features?

Action buttons

Action buttons

Templates

Templates

Email links

Email links

Registration & logins

Registration & logins

Forms

Forms

Hot spots

Hot spots

Accessibility options

Accessibility options

(to assist visual/hearing impairment)

(to assist visual/hearing impairment)

E-commerce facilities

E-commerce facilities

Online forums

Online forums

Can you describe what Aesthetics have been used on each website?

(Describe the colours, layout, graphics/video/animation, audio, text & styles)

If you were the designer of these websites, what would you change?

Activity 5: Programming Challenge

Use your problem-solving skills to see who committed the crime. This is called **Pseudo-code** and is used to develop large programmes.

THE SUSPECTS

- Professor Plum
- Mrs Peacock
- Reverend Green
- Mr Black
- Miss Scarlet

Doctor Pink has been found murdered downstairs in the kitchen, battered by some lead piping, at 20:00 hours. By a process of elimination find out *“whodunnit”* by looking at the following pseudo-code.

```
IF TimeFound < 21:00 THEN
    IF (Location = Downstairs) AND (weapon=knife) THEN
        Reverend Green = innocent
    END IF
    IF (Location = Downstairs) OR (weapon=knife) THEN
        Mr Black = innocent
    ELSE
        Miss Scarlet=Innocent
    ENDIF
ELSE
    Professor Plum = innocent
END IF

IF Location<>Conservatory THEN
    IF Location=Kitchen THEN
        CASE Weapon of
            Gun: Mr Black=innocent
            Candlestick: Reverend Green = innocent
            Lead Piping: Mrs Peacock = innocent
            Rope: Professor Plum=innocent
        END CASE
    END IF
    IF (location<> upstairs) AND (TimeFound>12:00) Then
        Professor Plum = innocent
        IF location=kitchen THEN
            Miss Scarlet=innocent
        ENDIF
    ELSE
        Mr Black = innocent
    ENDIF
END IF
```

The culprit was: _____