What's the difference between Computing and ICT?

Computer Science is the study of both computer hardware and software design. It encompasses both the study of theoretical algorithms and the practical problems involved in implementing them through computer hardware and software. The study of Computer Science has many branches, including artificial intelligence, software engineering, programming and computer graphics. The need for Computer Science as a discipline has grown as computers become more integrated into our day-to-day lives and technology continues to advance.

https://www.techopedia.com/definition/592/computer-science

Information and Communications Technology (ICT) refers to all the technology used to handle telecommunications, broadcast media, intelligent building management systems, audiovisual processing and transmission systems, and network-based control and monitoring functions.

Although ICT is often considered an extended synonym for information technology (IT), its scope is more broad.

ICT has more recently been used to describe the convergence of several technologies and the use of common transmission lines carrying very diverse data and communication types and formats.

https://www.techopedia.com/definition/24152/information-and-communications-technology-ict

What careers can my subject lead to?

Computer Science

The majority of Computer Science graduates go on to jobs in computing, for example, as programmers, software developers or web designers. However, some pursue careers in financial services and professional services, and there are opportunities open to them in a broad range of areas including education, retail management and law. Growth areas for employment in computing include cyber security, mobile and cloud computing and developing applications of social media.

Specific skills:

- Computer Science graduates gain a range of technical and interpersonal skills from their degrees.
- A capacity to think logically, quantitatively and creatively is probably the single most important skill you can gain.
- Software development: design, engineering and one or more programming languages (such as Java or C#).

- An understanding of computer networking, databases, and some level of web development along with a general knowledge of computers.
- Ability to communicate your ideas, both verbally through giving presentations and in the form of written assignments. This is very important since a lot of time is spent presenting ideas and explaining decisions taken.
- Good planning and careful execution of your work; in many Computer Science tasks the planning and design phase is crucial, and this is transferable into the wider world.
- Teamwork is another important addition, since Computer Science graduates will often find themselves working closely with many people on a day-to-day basis.

Information Communication Technology (ICT)

If studying for a career in Computer Science isn't your thing, but you want a career working with computers, communication, or technology, then ICT may be a good fit.

Even if you do not plan to develop a career as an ICT professional, the skills gained from completing an ICT course will serve you well in many different careers. Banking, finance, media, journalism, administrative work to name a few all rely heavily on employees having a good understanding of ICT.

Information and Communications Technology (ICT) professionals conduct research, plan, design, write, test, provide advice and improve information technology systems, hardware, software and related concepts for specific applications. These activities could take place in different work situations, for example, within the internet, wireless networks, mobile phones, gaming or apps development and other media for communication.

There are different routes into a career in ICT:-

•   A typical ICT degree focuses on business uses for computer networks. While you will not study the theoretical aspects of modern computing, you will learn the theory of networks, the architecture of operating systems, and hardware operations.

•   Apprenticeships – either level 2 or level 3. During these programmes you will gain invaluable work-based employment skills and training, at the same time as having the opportunity to obtain specialists ICT qualifications.

You should also learn practical skills, like computer repair, fixing routers and switches, and network server operating systems and their configurations.

From 2005 to 2015, employment for ICT professionals grew by 30% and between 2016-19 grew by more than 4.5% which was 3 times that of the average within the UK economy. This means ICT professionals are in demand!

Many of the world's largest businesses are technology and ICT focussed, for example, Amazon, Google, the Facebook group. These employers have large numbers of UK based employees.

Specific skills for a career in ICT:

•   A capacity to think logically, quantitatively and creatively is probably the single most important skill you can gain.

•   Good understanding of software packages such a Microsoft office and web design.

•	An understanding of computer networking and some level of web development along with a general knowledge of computers.

•	Ability to communicate your ideas, both verbally through giving presentations and in the form of written assignments. This is very important since a lot of time is spent presenting ideas and explaining decisions taken.

•	Good planning and careful execution of your work; many ICT projects involve a planning and design phase which is crucial, and this is transferable into the wider world.

•	Teamwork is another important addition, since ICT professionals will often find themselves working closely with many people on a day-to-day basis.

Typical careers where specific ICT skills are required:

•	Computer programmers

•	Network managers

•	Database administrators

•	IT technician

•	Web designers and developers

•	Apps designers

There are thousands of different types of jobs in ICT which spam across the public and private sector. From working in large businesses to being self-employed. For further advice please use the following links:

https://successatschool.org/advicedetails/387/careers-in-ict

https://nationalcareers.service.gov.uk/job-profiles/it-support-technician

Information and Communication Technologies (ICT)Apprenticeships: A subject snapshot guide for teachers

https://amazingapprenticeships.com/app/uploads/2020/01/NAW2020-ICT-Subject-Snapshot.pdf

ADMINISTRATION
AND
I T

careers using administration and IT

insurance	banking	procurement
civil service	financial services	clerical work
reception work	local government	human resources
secretarial work	event management	office management
paralegal services	data administration	quality management
travel and tourism	court administration	call centre operations
housing administration	distribution administration	payroll administration
customer support services	health service administration	transport administration

COMPUTING SCIENCE

careers using computing science

bioinformatics	cyber security	teaching
business analysis	IT consultant	web development
computer aided design	IT support services	systems development
3D modelling and animation	database administration	network management
computer games programming	games production management	computer hardware engineering
software programming	multimedia development	systems analysis and design
computer games testing	IT project management	software engineering