**CFES SCHOLAR PATHWAYS TO COLLEGE ASSIGNMENT**

It is your responsibility as a CFES scholar to find out as much as you can about possible future careers in order to help set targets, reach your goals and be successful.

For this assignment you must investigate two college courses. The first must be a course in a STEM area (Science, Technology, Engineering and Maths) while the second course can be in any area you choose.

When picking the course you can consult the “study sectors” page. This will help you identify the area of study your course belongs to. Make sure you pick at least one course that is in a STEM area.

When researching your chosen courses, you may find some of the links on the “resource” page useful.

For the final part of the assignment you must calculate your current points score based on your six best subjects in your last exams. Use the “guide to grades” page to learn how to calculate your CAO points.

**Study Sectors**

*(Adapted from careersportal.ie)*

**SCIENCE & ENGINEERING (STEM Areas)**

***Building & Construction***

This study area includes subjects such as structural engineering, land and building surveying, site management, building technology, mining engineering, roads and transport engineering, architecture

***Mechanical Engineering & Manufacturing***

This study area includes subjects such as technical drawing / computer aided design (CAD), mechanics, power systems, fluid mechanics, aerospace engineering, materials, stress analysis, thermodynamics, and computerised manufacturing systems.

***Chemical, Biomedical & Pharmaceutical Sciences***

This study area includes subjects such as biological science, pharmaceutical science (creation, development and make-up of drugs and medicines), chemistry and biochemistry. You may also study subjects such as cell biology, microbiology and molecular biology. Laboratory work often forms a substantial part of these courses.

***Computers & Software***

This broad study area includes subjects dealing with computer hardware (e.g. PCs, networking), software (e.g. operating systems, programming languages), computer science (e.g. theory, maths) to complete systems (e.g. process control systems, software / web applications).

***Electronic & Electrical Engineering***

This study area includes subjects such as electronics, control systems, computer skills in both hardware and software, automated systems, robotics, microelectronics, telecommunications and power engineering.

***Physical & Mathematical Sciences***

This study area includes subjects such as physics, mathematics, statistics, computing, chemistry, experimental physics, astronomy, optics and electronics.

***Medical Devices***

This study area includes subjects such as biotechnology, biomedical science, manufacturing engineering, and process engineering

***Earth Science & Environment***

This study area includes subjects such as oceanography, environmental science, marine biology, environmental management, conservation, geography, bioscience, earth science and energy engineering.

***Medical & Healthcare***

This study area includes subjects such as nursing, physiotherapy, dentistry, nutrition, medicine, radiography, pharmacy etc.

***Animals & Veterinary Science***

This study area includes subjects such as genetics, animal physiology, animal nutrition, animal behaviour, animal health and welfare, animal conservation and wildlife.

***Agriculture, Horticulture, Forestry, & Food***

This study area includes subjects such as animal and crop production, biochemistry, biology and microbiology, environmental protection, food safety and forestry.

***Maritime, Fishing & Aqua-culture***

This study area includes subjects such as genetics, animal physiology, animal nutrition, animal behaviour, animal health and welfare, animal conservation and wildlife.

**ARTISTIC & CREATIVE**

***Art, Craft & Design***

This study area includes subjects such as drawing, painting, printmaking, ceramics, craft design, photography, art appreciation, web design, graphic design, product design and fashion design

***Entertainment & Performing Arts***

This study area includes subjects such as music, drama, theatre or some other aspect of the entertainment industry.

**ARTS / SOCIAL SCIENCES**

***Social Science & Community Care***

This study area includes subjects such as psychology, social science, childhood studies, community/youth studies, social care and intellectual disability. Some courses may involve training in professional social work roles.

***Classic Arts, Languages & Culture***

This broad study area includes subjects such as anthropology, European or Asian languages and culture, geography, history, archaeology, philosophy, classical studies, Celtic studies etc.

***Politics / Law***

This study area includes subjects such as legal research/writing, property law, European community law, human rights, politics, economics, public policy, constitutional law, labour law, commercial law and company law.

***Media & Publishing***

This study area includes subjects covering the techniques and theories of traditional and digital media (newspaper, print, radio, TV, internet), writing and editing, researching and information management.

***Education***

This study area includes subjects that will lead to a qualification to teach or carry out other work in a school, college or other educational setting.

***Leisure, Sport & Fitness***

This study area includes subjects such as sports psychology, recreation management, technology & sports, coaching, aquatics, business (sports and recreation focused), sports & leisure administration, physiology and health.

***Tourism & Hospitality***

This study area includes a range of subjects relating to the tourism sector, such as tourism studies, hotel management, business law, management accounting, marketing research, and often a foreign language.

**BUSINESS / ADMINISTRATION**

***Business General***

This broad study area includes a range of business subjects with a special focus on topics such as company culture, market research, new business/product development, advertising and promotion, PR (public or press relations) and sales

***Accountancy / Financial Services***

This study area includes subjects such as accountancy, economics, financial management, risk management, banking and financial markets, insurance studies and international finance. Some of these courses prepare for the Professional Accountancy Bodies exams.

**Resources**

Carrersportal.ie has a lot of resources for second level students on possible career paths and college courses:

http://www.careersportal.ie/school/

Each college will have a book(s) containing lists and descriptions of the courses available as well as entry requirements. This book is called the prospectus and can be found online. Below are links to some college prospectus but many more are available both in Ireland and abroad:

Trinity College Dublin (TCD) Prospectus

<http://www.tcd.ie/study/assets/pdf/TCD-Prospectus-2015.pdf>

University College Dublin (UCD) Prospectus

<https://myucd.ucd.ie/undergraduate-prospectus/index.ezc>

Dublin City University Prospectus

<https://www.dcu.ie/prospective/degrees.php>

NUI Maynooth Prospectus

<https://www.maynoothuniversity.ie/study-maynooth/download-prospectus-booklets>

Dublin Institute of Technology Prospectus

<http://www.dit.ie/study/undergraduate/>

University College Cork (UCC) Prospectus

<http://www.ucc.ie/en/study/undergrad/what/download/>

**Guides to Grades *(Adapted from cao.ie)***

After you sit your leaving certificate exam, your total CAO points will be calculated from your 6 best subjects. The table below will allow you to calculate the points for each subject based on your mark and the level of the paper.

| **Leaving Cert Points** | **Higher Paper** | **Lower Paper** |  |
| --- | --- | --- | --- |
| 100 |  |  |  |
| 88 |  |  |  |
| 77 |  |  |  |
| 66 |  |  |  |
| 56 |  |  |  |
| 46 |  |  |  |
| 37 |  |  |  |
| 0 |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Important Notes:**

* 25 bonus points will be added to the points score for Leaving Certificate Higher Level Mathematics.
* NCAD does not award points for Leaving Certificate or other examinations. Consult NCAD literature for details.

**Example**

We will use an example to calculate a points score, including bonus points for Higher Level Mathematics:

An applicant has the following seven results:

| **Subject** | **Level** | **Grade** | **Score** |
| --- | --- | --- | --- |
| Irish | Higher | C2 | **65** |
| English | Ordinary | A1 | **60** |
| Maths | Higher | D2 | 50+25=**75** |
| French | Higher | B2 | **80** |
| Biology | Higher | C1 | **70** |
| Geography | Ordinary | A1 | 60 |
| History | Higher | B3 | **75** |
| Add the best six scores, shown in **bold**. |  |  | **Points = 425** |

**Course Investigation 1: STEM Course**

|  |  |
| --- | --- |
| Title of  Course |  |
| CAO Course code |  |
| College |  |
| Number of Places on course |  |
| Duration of Course |  |
| 2014 CAO points for this course |  |

What are the subject requirements for the course you have chosen?

|  |  |
| --- | --- |
| Leaving Cert Subject | Minimum Grade |
|  |  |
|  |  |
|  |  |
|  |  |

Are there any other colleges that offer the same course or a similar one?

|  |  |  |
| --- | --- | --- |
| College | Course Title | Course Code |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

What subject studied on this course is most attractive to you and why?

What subject studied on this course is least attractive to you and why?

Give two examples of possible careers this course could lead to. For each career, try to find/estimate the average yearly salary.

Give one reason you would choose to study this course?

Give one reason you would not choose to study this course?

Discuss this course choice with your parents. What do you/they think of this course choice for you in the future? Explain your answer

**Course Investigation 2: STEM or Non-STEM Course**

|  |  |
| --- | --- |
| Title of Course |  |
| CAO Course code |  |
| College |  |
| Number of Places on course |  |
| Duration of Course |  |
| 2014 CAO points for this course |  |

What are the subject requirements for the course you have chosen?

|  |  |
| --- | --- |
| Leaving Cert Subject | Minimum Grade |
|  |  |
|  |  |
|  |  |
|  |  |

Are there any other colleges that offer the same course or a similar one?

|  |  |  |
| --- | --- | --- |
| College | Course Title | Course Code |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

What subject studied on this course is most attractive to you and why?

What subject studied on this course is least attractive to you and why?

Give two examples of possible careers this course could lead to. For each career, try to find the average yearly salary.

Give one reason you would choose to study this course?

Give one reason you would not choose to study this course?

Discuss this course choice with your parents. What do you/they think of this course choice for you in the future? Explain your answer

**CAO Points Calculator**

On the basis of your most recent exams

1. List your 6 best subject results and calculate the points using the Guide to Grades page
2. Remember if you are taking higher level maths you can add on 25 bonus points.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Subject | Higher | Ordinary | Grade | CAO Points |  | Target Grade | CAO Points |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |
|  |  |  | |  |  |  |  |  |
|  |  |  | | Total |  |  | Total |  |

When you look at your results, do you think this represents your best effort? Discuss this question with your parents and identify ways you can achieve your target grades