



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

ELTC /Computer Science Dissertation Writing Support Course

Lesson 1



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Lesson Outline

1. Dissertation Structure
2. Language: Academic Tone
3. Writing the abstract



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

- <https://forms.gle/Hf84oke51gBig1nw7>



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Course Aims

Help you develop language and writing skills required for your project dissertation...



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Dissertation Writing

1. What's the difference between a dissertation and an assignment?
2. Have you ever written a dissertation before?
3. What is the longest piece of writing you have done in English?
4. Have you chosen your project topic?
6. Have you written anything yet? (if so, what?)
7. Are you worried about anything related to writing your dissertation? If so, what?



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Dissertation Structure: Put in right order

a.Contents

b.Design

c.Abstract

d. Title Page

e.Introduction

f.Results + Discussion

g.Literature Review

h.Declaration

i.Requirements + Analysis

j.Conclusion

k.Implementation + Testing

l.Appendices

m.References

n.Acknowledgements

o.Covid-19 Impact Statement



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Dissertation Structure (answer)

1.Title Page

2.Declaration

3.Abstract

4.Covid-19 Impact Statement

5.Acknowledgements

6.Contents

7.Introduction

8.Literature Review

9.Requirements + Analysis

10.Design

11.Implementation + Testing

12.Results +Discussion

13.Conclusion

14.References

15.Appendices



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

What do you include in these sections?:

Declaration

Abstract

Literature review

Appendices



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Do all dissertations have to follow exactly the same structure?

‘The reader is the most important person.’ PGT Student Handbook 2021-2022

What should you assume about your reader? Will he/she be an expert?



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Where can you find examples of past dissertations?

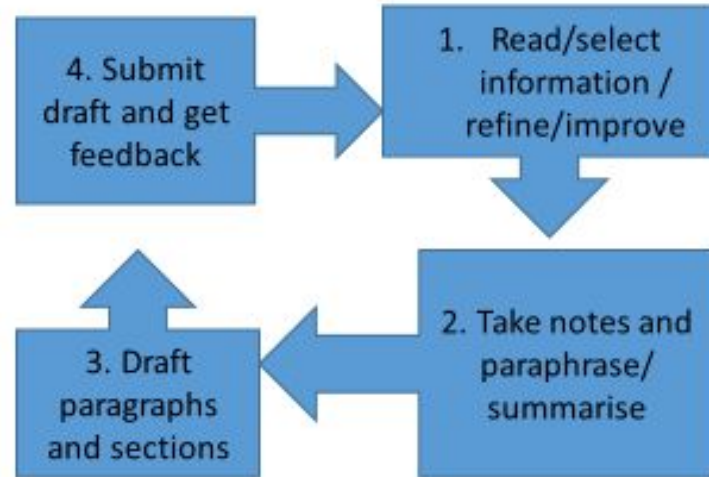
<https://sites.google.com/sheffield.ac.uk/compgtstudenthandbook/menu/msc-dissertation-project/previous-dissertations>

Dissertations: True or false?

1. Every chapter (except the introduction and conclusion) should have a short introduction.
2. Your supervisor will correct any grammar mistakes for you.
3. Your dissertation should be written in a formal academic style.
4. You will need to read articles in the area of your project for the literature review.
5. It's important to make a plan showing the main contents of each chapter.
6. Start writing your dissertation after you finish your practical work.
7. It's important to reference all information from the literature.
8. You can use the ELTC Writing Advisory Service to get feedback on your dissertation writing.
9. The whole dissertation should be written in complete sentences, not notes.

Reading & Writing processes

- Circular (not linear)
- Notes are a bridge to writing





The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Some academic writing skills you need for your dissertation

Use appropriate academic tone.

Use accurate and precise academic vocabulary.

Paraphrase the ideas of other writers (i.e. use your own words).

Use cohesion appropriately to connect my ideas and reflect the logic of my thinking.

Use coherence appropriately to help me organise the work overall and to help the reader follow it.

Proofread my own work, checking for my common mistakes.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Academic style

Which of the following sentences is written in formal academic style?

1. In Britain, there are lots of families who are suffering from unemployment.
2. This research is about crime and unemployment.
3. This research deals with new government policies.
4. The data weren't collected accurately so the conclusions aren't reliable.
5. Why is this topic important?



- Lots of
- Vague / not specific (when?)
- is about – too general / spoken / informal (focuses on, investigates)
- Deals with – many meanings - what exactly does it mean here?
- ~~Don't~~ Do not use contractions (e.g. Weren't, aren't – were not, are not etc)
- No rhetorical questions (This is important because)

Be specific, precise and accurate.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Informal (not academic)

Contractions (don't)

Phrasal verbs (set up)

Personal pronouns (I/we/you)

Lots of

Personal feelings/opinion

Formal (academic)

Full forms (did not)

Single word verbs (begin)

Passive grammar

Many

Impersonal style

Use the noun (items/factors/ideas)



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Change the following informally written text into FORMAL ACADEMIC style.

In my country, lots of research is being done on robots, like getting robots to interact with people. Some big companies are putting a lot of time and money into this kind of research. It's interesting because scientists have to think about psychology, sociology and human communication and relationships. A big project in Germany's trying to get a robot to ask people how to get to a place in the city. In my opinion, this kind of thing will definitely be useful in the future. But there're lots of things to sort out when you try to design a robot. What sorts of problems are there? If you want to make sure your robot can get somewhere, it has to be able to spot dangerous things, like roads and rivers. Then it has to avoid them.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

https://docs.google.com/document/d/1WB2pQmvjGQkn_9ok9T5LVsaN0wG3dw3Bpuue2ix4MrA/edit?usp=sharing



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

In Britain, much research is being undertaken on robots, such as developing human-robot interaction. Several large companies are investing significant amounts of time and money into such research. It is interesting because scientists have to consider psychology, sociology, human communication and relationships. A large project in Germany is developing a robot to ask people how to get to a place in the city. Such a robot might be useful in the future; however, there are numerous problems to solve when designing a robot. For example, to ensure that the robot can navigate, it needs to be able to identify and avoid dangers.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

What's the difference between an abstract and an introduction?



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

An abstract is 2 or 3 paragraphs describing the whole dissertation (about 100-150 words).

From the abstract a reader should be able to ascertain if the project is of interest to them and presents results of which they would like to know more details.



Differences

Abstract

- Representation of the whole dissertation
- Common structure
- May occur alone/separate from main text

Introduction

- Introduces field & creates a setting for the research
- Refers to previous research
- Links present & previous research
- Justifies present research
- Identifies the aims of the present research
- Part of the dissertation
- Leads into main text



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Characteristics of an Abstract

- Informative
- Concise
- Clear



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Abstracts can include the following:

1. The **background information** for your research.
2. The **central questions** or statement of the **problem** your research addresses
3. **What's already known** about this question, what **previous research** has done or shown, is there a **gap** in the research.
4. The **aim** of your research.
5. Your research **methods** - how you got your data
6. Your main **findings, results, or arguments**
7. The **significance** or **implications** of your findings or arguments.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Read the abstract of a dissertation. Which of the elements can you find?



Read the abstract. What is the focus of the research?

We already have the technology that can help us navigate through our streets and roads in everyday life, but one area that has been neglected to be mapped sufficiently is our rural spaces, for example country walks.

The aim of this project is to be able to map out these areas using the location services available on mobile devices. In this project an algorithm has been developed to tackle this problem; it can be divided into two parts. The first stage is called route detection, which begins to model individual paths using a method called 'local principal curves' that was shown to give very accurate path representations. The second stage is known as route planning, which is the process of amalgamating these individual paths into a single functional map. Finding an adaptive criterion for aggregating the routes was difficult and results for this were poor. The final map was used as an aid for users to find the quickest route from their desired locations. In this paper each section of the algorithm is set out mathematically, its implementation in Python is detailed and its performance has been thoroughly discussed.

Read the abstract. What is the focus of the research?

We already have the technology that can help us navigate through our streets and roads in everyday life, but one area that has been neglected to be mapped sufficiently is our rural spaces, for example country walks.

The aim of this project is to be able to map out these areas using the location services available on mobile devices. In this project an algorithm has been developed to tackle this problem; it can be divided into two parts. The first stage is called route detection, which begins to model individual paths using a method called 'local principal curves' that was shown to give very accurate path representations. The second stage is known as route planning, which is the process of amalgamating these individual paths into a single functional map. Finding an adaptive criterion for aggregating the routes was difficult and results for this were poor. The final map was used as an aid for users to find the quickest route from their desired locations. In this paper each section of the algorithm is set out mathematically, its implementation in Python is detailed and its performance has been thoroughly discussed.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

MSc dissertation: 'A Navigation Application in an Opaque Environment'

By kind permission of Georgia Harrison

What tense are the underlined verbs?

We already have the technology that can help us navigate through our streets and roads in everyday life, but one area that has been neglected to be mapped sufficiently is our rural spaces, for example country walks.

The aim of this project is to be able to map out these areas using the location services available on mobile devices. In this project an algorithm has been developed to tackle this problem; it can be divided into two parts. The first stage is called route detection, which begins to model individual paths using a method called 'local principal curves' that was shown to give very accurate path representations. The second stage is known as route planning, which is the process of amalgamating these individual paths into a single functional map. Finding an adaptive criterion for aggregating the routes was difficult and results for this were poor. The final map was used as an aid for users to find the quickest route from their desired locations. In this paper each section of the algorithm is set out mathematically, its implementation in Python is detailed and its performance has been thoroughly discussed.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Has been neglected = present perfect

Is = present simple

Was shown, was used = past simple

Was (difficult, poor) = past simple

Is set out = present simple



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Tense in abstracts

Present perfect - describing previous research (no specific time given)

Describing the aim of our research - present simple

Giving an outline of the paper - present simple

Describing what we did, the results obtained- past simple



Put the verbs in brackets into the correct tense

Many people rely on the internet as a source of news. This can cause issues when they come to satirical news articles, designed for humour or to send a political message, but with little or no factual basis. There _____ (be) a number of proposed solutions to this problem, from utilising the sentiment in the articles (Riloff et al., 2013) to the use of big data, such as in Burfoot and Baldwin's work on satire detection (2009).

This work _____ (build) on Burfoot and Baldwin's satire detection experiments, testing the usefulness of their additional features by combining them to try and maximise the success. The effects of bias in their data set _____ (investigate). It _____ (find) that their 'semantic validity' feature significantly improved the results of a bagofwords model, although the effects of combining the features showed no significant improvement. It ____also_____ (find) that reducing the bias in the data set improved the system.



Many people rely on the internet as a source of news. This can cause issues when they come to satirical news articles, designed for humour or to send a political message, but with little or no factual basis. There have been a number of proposed solutions to this problem, from utilising the sentiment in the articles (Riloff et al., 2013) to the use of big data, such as in Burfoot and Baldwin's work on satire detection (2009).

This work builds on Burfoot and Baldwin's satire detection experiments, testing the usefulness of their additional features by combining them to try and maximise the success. The effects of bias in their data set were also investigated. It was found that their 'semantic validity' feature significantly improved the results of a bagof words model, although the effects of combining the features showed no significant improvement. It was also found that reducing the bias in the data set improved the system.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Referring to tables and charts in your writing

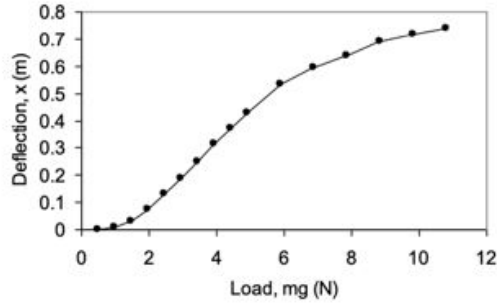
It is common to include tables and charts in academic writing.

It is important that you refer to them clearly and introduce them to your reader.

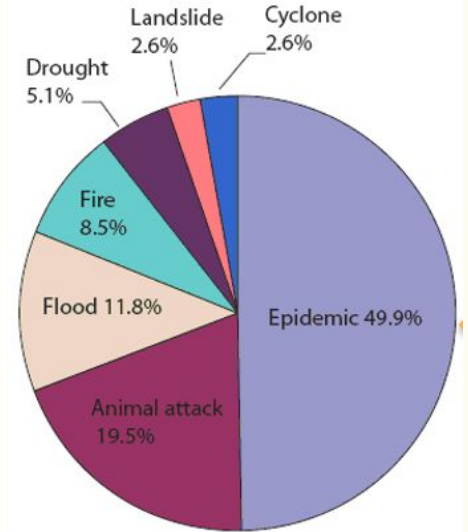
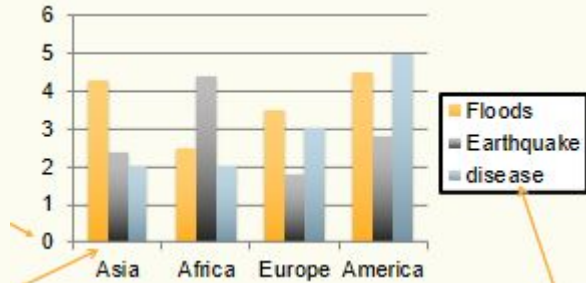


The
University
Of
Sheffield.

English
Language
Teaching
Centre.



Applied Mass	Measured Deflection	Applied Mass	Applied Load	Measured Deflection	Spring Constant, k	Natural Frequency, ω_n
g	mm	kg	N	m	N/m	Hz
50	0	0.05	0.49	0	nda	nda
100	10	0.10	0.98	0.010	49.1	3.52
150	32	0.15	1.47	0.032	22.3	1.94
200	75	0.20	1.96	0.075	11.4	1.20
250	129	0.25	2.45	0.129	9.08	0.96
300	189	0.30	2.94	0.189	8.18	0.83
350	250	0.35	3.43	0.250	8.04	0.76
400	316	0.40	3.92	0.316	7.43	0.69
450	372	0.45	4.41	0.372	8.76	0.70
500	429	0.50	4.91	0.429	8.61	0.66
600	535	0.60	5.89	0.535	9.25	0.63
700	595	0.70	6.87	0.595	16.3	0.77
800	640	0.80	7.85	0.640	21.8	0.83
900	690	0.90	8.83	0.690	19.6	0.74
1000	715	1.00	9.81	0.715	39.2	1.00
1100	740	1.10	10.79	0.740	39.2	0.95





Types of chart or figure

- Guess the illustration type for the correct purpose

To accomplish this	type of illustration, figure, chart or diagram
to present raw data (<u>data</u> which does not fit into a simple pattern)	
compare between different categories; data is grouped nominally or ordinally	
showing trends usually over time; helps to make predictions	
to show proportions	
to show processes	
summarise trends, show pattern rather than	



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

To accomplish this	type of illustration, figure, chart or diagram
to present raw data (<u>data</u> which does not fit into a simple pattern)	list, table
compare between different categories; data is grouped nominally or ordinaly	bar graph
showing trends usually over time; helps to make predictions	line chart
to show proportions	pie charts
to show processes	flow chart
summarize trends, show pattern rather than	area chart



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Table 1
Figure 1

shows
compares
presents
provides

an overview of ...
the experimental data on X.
the summary statistics for ...
the breakdown of X according to ...
the intercorrelations among the nine measures of X.
the results obtained from the preliminary analysis of X.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

The results of the correlational analysis
The themes identified in these responses
The results obtained from the preliminary analysis of X

are shown
are set out
are presented
can be compared
are summarised

in Table 1.
in Figure 1.

The table below illustrates
The pie chart above shows
The top half of the table shows
The bottom half of the table shows

some of the main characteristics of the ...
the breakdown of ...



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

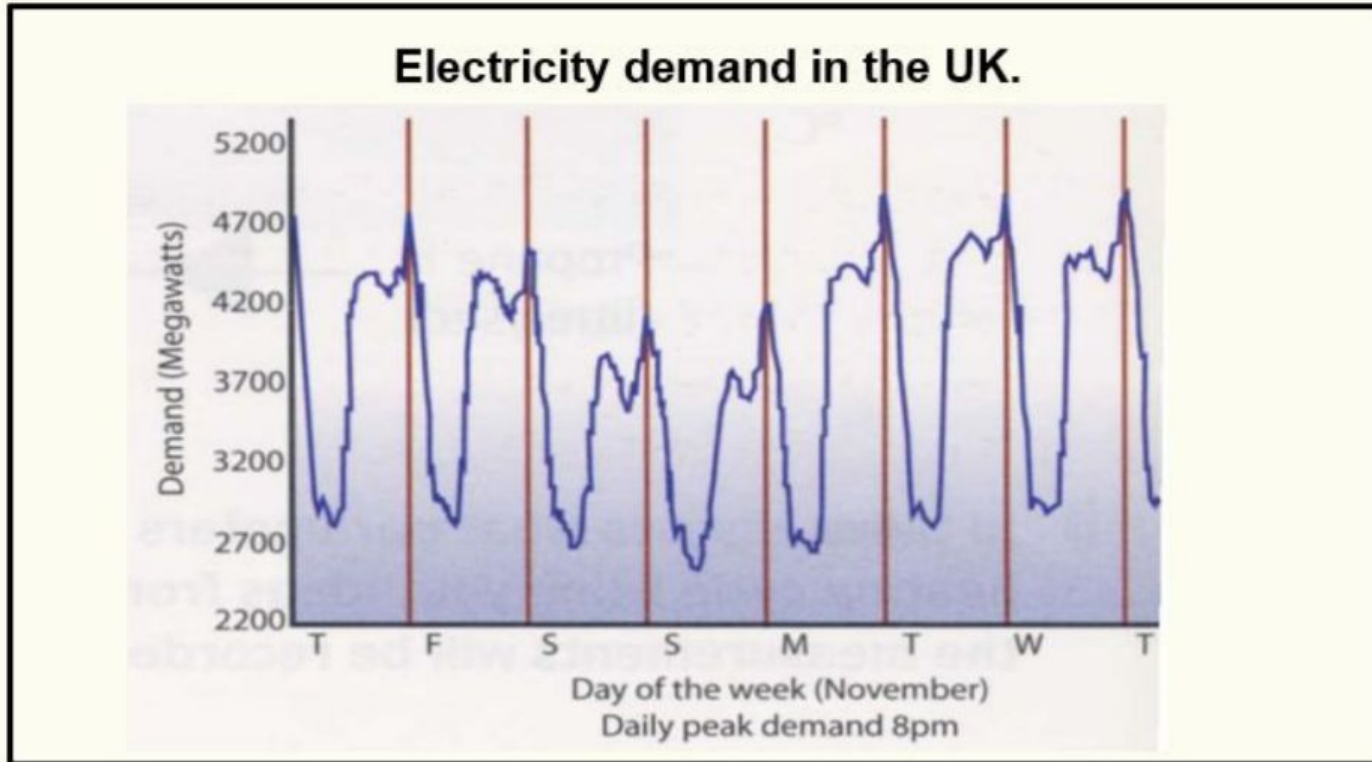
<http://www.phrasebank.manchester.ac.uk/reporting-results/>



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Figure 1





The
University
Of
Sheffield.

English
Language
Teaching
Centre.

Figure 1

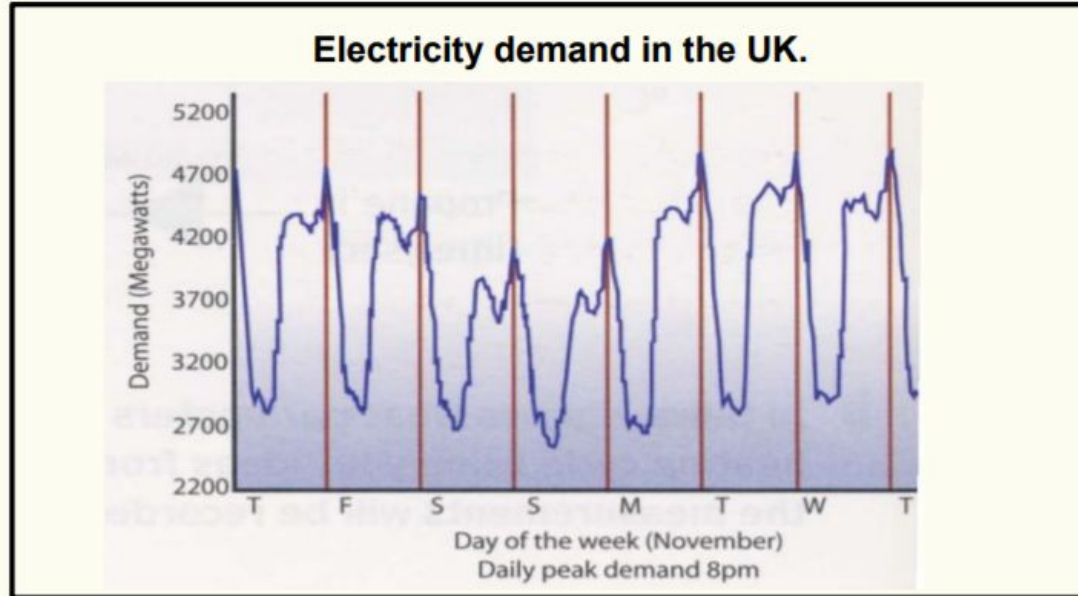


Figure 1 shows daily fluctuations in demand for electricity in the UK for the month of November.



The
University
Of
Sheffield.

English
Language
Teaching
Centre.

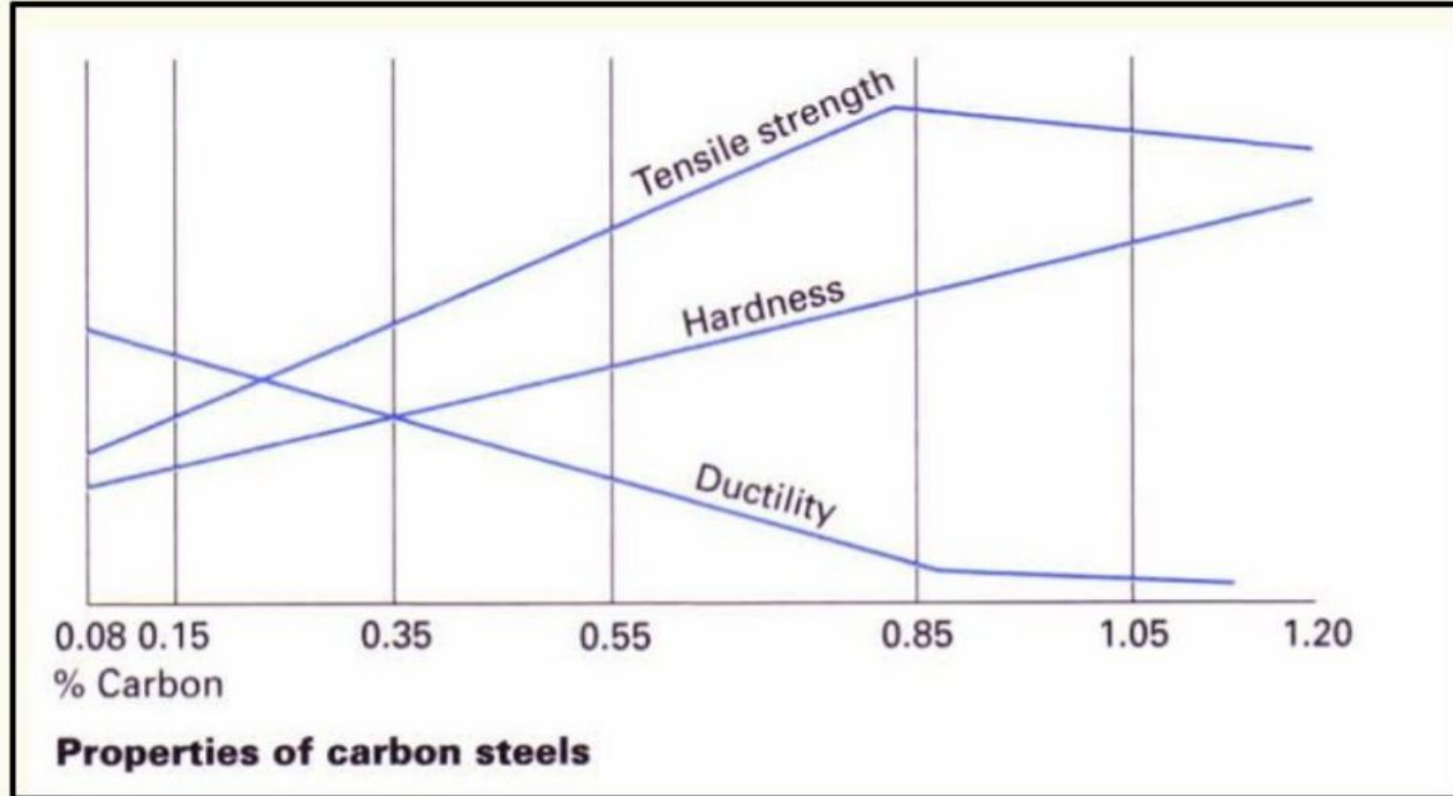
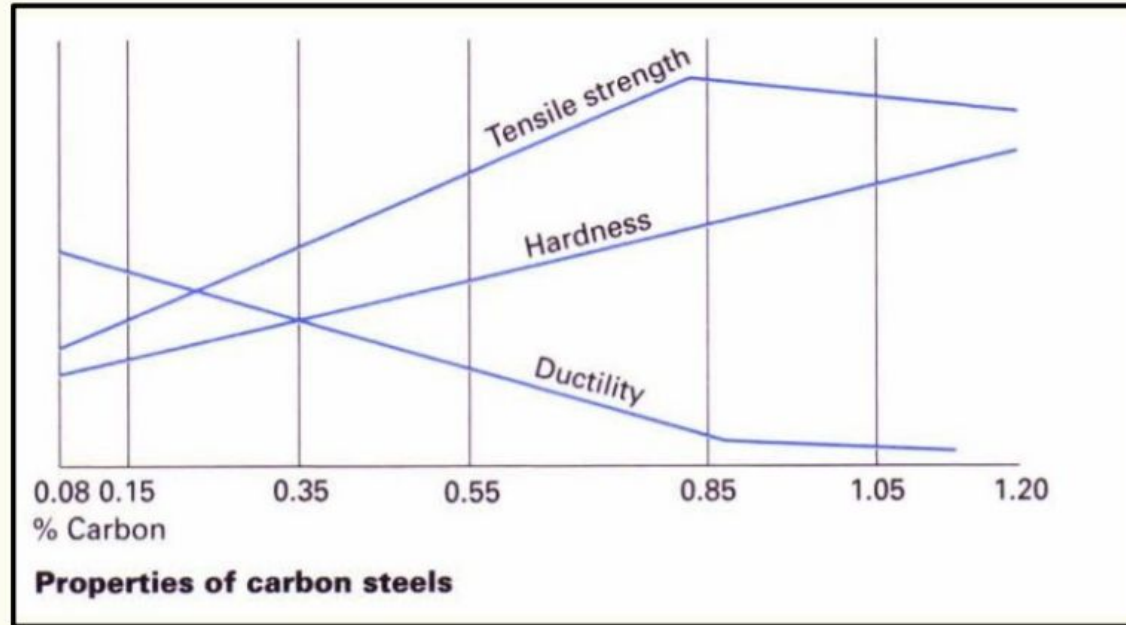




Figure 4



From the graph in figure 4 we can see that increased concentrations of carbon in steel have a significantly different effect on ductility in comparison to tensile strength and hardness.



Table 1

European standard specifications for IPE beams.

Type	Beam height (mm)	Flange width (mm)	Web thickness (mm)	Flange thickness (mm)	Weight (kg/m)	Cross-section area (cm ²)	Moment of inertia in torsion (J) (cm ⁴)
IPE 80	80	46	3.8	5.2	6.0	7.64	0.70
IPE 100	100	55	4.1	5.7	8.1	10.3	1.10
IPE 120	120	64	4.4	6.3	10.4	13.2	1.71
IPE 140	140	73	4.7	6.9	12.9	16.4	2.54
IPE 750 x 137	753	263	11.5	17	137	175	137.1
IPE 750 x 147	753	265	13.2	17	147	188	161.5
IPE 750 x 173	762	267	14.4	21.6	173	221	273.6
IPE 750 x 196	770	268	15.6	25.4	196	251	408.9



Table 1

European standard specifications for IPE beams.

Type	Beam height (mm)	Flange width (mm)	Web thickness (mm)	Flange thickness (mm)	Weight (kg/m)	Cross-section area (cm ²)	Moment of inertia in torsion (J) (cm ⁴)
IPE 80	80	46	3.8	5.2	6.0	7.64	0.70
IPE 100	100	55	4.1	5.7	8.1	10.3	1.10
IPE 120	120	64	4.4	6.3	10.4	13.2	1.71
IPE 140	140	73	4.7	6.9	12.9	16.4	2.54
IPE 750 x 137	753	263	11.5	17	137	175	137.1
IPE 750 x 147	753	265	13.2	17	147	188	161.5
IPE 750 x 173	762	267	14.4	21.6	173	221	273.6
IPE 750 x 196	770	268	15.6	25.4	196	251	408.9

Table 1 illustrates some of the main European standard specifications for IPE beams.