

# How to write an essay, making a presentation [1-8]

## References:

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## AN ESSAY ON ENGINEERING

« [1.-3]

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Take a look around yourself. What do you see? Maybe books, chairs, a television, or even your clothes. All the day to day things that are man-made, you can be sure that an engineer helped make it. Engineers have shaped our world as we know it. There are many different kinds of engineers from chemical, mechanical, textile, civil, agricultural and structural engineers. Our civilization would be as advanced as the Stone Age without these people. This career demands a wide education of math and science. It is an ever-changing career with new advances in materials and the way products are produced. Engineering careers are very secure with respect to compensation. Regardless of this, it does have it's disadvantages as well. All and all engineering is demanding, but well worth the work.



The education of an engineer is probably the most demanding as far as the mastery of the material given as any other degree. Usually in their first year, a student will be put into a special program that starts the course load with math and science. These are the basis for every engineer's education. After the first two years of the program, the student chooses exactly what field of engineering he or she would like and finishes out their degree concentrating on that particular field. Towards the end of their college career, the student will usually be offered a job by recruitment or they are hired after they graduate. Most employers seek out four-year graduates with a degree in a specific area of concentration.

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»[1.-3]



Engineering has many advantages to offer. The best would probably be the salary. A student with an engineering bachelors degree will be offered a higher paying job on average than any other bachelors degree offered. (Basta 12) An average annual salary in a starting Federal Government position was \$96,370 in 1994. Along with high wages comes job security. Even when the economy is bad, unemployment of engineers will only rise one or two points on average. (Kirby 64) Other advantages include interesting work, creative work and working with the latest technological advances in the field you choose to go into. Engineering as a whole shows many superior qualities over other jobs, but it also has its disadvantages.

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»[1.-3]



Engineering degrees require the most math and science of any other degrees offered. The study is extremely hard work and only ten percent of all starting students in an engineering program finish their major and graduate with a degree. (Britannica 243) Another disadvantage of being an engineer is the actual status of being one. It is not looked upon as highly as other fields such as doctors and lawyers. Most of the time they are looked upon as nerds. In addition, most engineers are not promoted to high level positions such as presidents or top executives. They do not have the accounting or business education to do that particular job. This means that most engineers never get the opportunity to be their own boss. (Basta 22)

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»[1.-3]

The job of an engineer itself is a creative job. The actual definition of an engineer is "The profession in which a knowledge of the mathematical and natural sciences gained by study, experience and practice is applied with judgment to develop ways to utilize the materials and forces of nature economically for the benefit of mankind." (Bastas 24) In having the basic skills and experiences in math and science, an engineer is basically an inventor. They are given a problem and are depended on to come up with a solution. Whether it be a new chemical, a mechanical part, or even a whole new system such as computer operating program, engineers are the problem solvers of our materialistic society. (Basta 45)

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None the less, the career of engineering is one that provides many benefits to the ones who are willing to work for the degree. This field has a variety of areas to excel in. It provides creative work, the chance to work with a team, and the compensation is far from the average. Engineering is also one of the most important careers in our society. Without it, our civilization would be nothing like it is today; and the pleasures that many of us take for granted would not be here to comfort us.

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## MAKING A PRESENTATION

What do you think is the most difficult aspect of making presentations?

## Preparing the presentation

[1.-4]

1) Akar N. Z., Özkan Y., Tarhan Ş. (2005)  
"Language and Communication Skills After Graduation"  
Department of Modern Languages, School of Foreign  
Languages, Metu Press, Metu, Ankara

# Delivering the presentation

## Using Body Language Effectively

### Preparing Good Visuals and Using Them Effectively

### Using Your Voice, Pace and Pauses Effectively

- 1) Akar N. Z., Özkan Y., Tarhan Ş. (2005)  
“Language and Communication Skills After Graduation”  
Department of Modern Languages, School of Foreign  
Languages, Metu Press, Metu, Ankara

Rewrite the sentences below with the correct word order to make the phrases.


During at five talk, I'll my be main looking areas.

During my talk, I'll be looking at five main areas.

What in will about this you talk presentation?


What will you talk about in this presentation?

A in your you to concluding repeat paragraph allows the main points essay.




**A concluding paragraph allows you to repeat the main points in your essay.**

Put coming your order in visuals to before class.



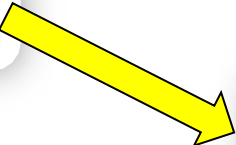
**Put your visuals in order before coming to class.**

After my there will be for time discussion and any talk questions.




**After my talk there will be time for discussion and any questions.**

I've three my into divided talk parts.



**I've divided my talk into three parts.**

I like to of my would take your at the questions end talk.



**I would like to take your questions at the end of my talk.**



Yapılan çalışmada *S. cerevisiae* mayasının çoğaltıldığı bir biyoreaktörde sıvı besi ortamında bulunan kısıtlayıcı bileşen glukozun optimum değeri araştırılmış ve Monod kinetiği incelenmiştir. Bulunan optimum 30 g/L glukoz derişimi kullanılarak hazırlanan besi ortamında değişik sıcaklıklarda biyotepkime gerçekleştirilmiş ve 32°C'de en yüksek özgül çoğalma hızı ile mikroorganizma derişimi sırasıyla 0,514 st<sup>-1</sup> ve 6,85 g/L olarak elde edilmiştir. Bulunan en uygun glukoz derişimi ve sıcaklık değerlerinde, sıcaklık kontrolü yapılmaksızın 2 L hacimli karıştırılmalı kesikli bir biyoreaktörde biyotepkime gerçekleştirilmiş ve 8 saat sonunda sıcaklığın 2,5°C yükseldiği ve glukozun yüksek bir hızla tüketildiği görülmüştür. Bu sonuçlara göre biyoreaktör çoğalma ortamı sıcaklığının kontrol edilmesine karar verilerek PID kontrol yöntemi uygulanmıştır.  $K_C, \tau_I, \tau_D$  PID parametreleri bulunarak kontrol algoritmasına yerleştirilmiş ve biyoreaktörün optimum sıcaklıkta kontrolü sisteme on-line bağlı bilgisayar ile gerçekleştirilmiştir. Kontrol deneyleri sonuçlarına göre biyoreaktör 32°C optimum sıcaklıkta kontrol edildiği durumda %14 daha fazla mikroorganizma elde edilmiştir.

Anahtar kelimeler: Biyoproses, PID kontrol, *S.cerevisiae* Üretimi.

[17]

Ertunç S., Akay B., Hapoğlu H., Alpbaz M. (2001)  
"Kesikli Biyoreaktörde *S. Cerevisiae* (NRRL Y-567) Mikroorganizmasının  
Çoğalmasına Glukozun Etkisi ve Optimum Sıcaklığın Geri Beslemeli Kontrolü"  
Fırat Üniversitesi Fen ve Müh. Bilimleri Dergisi 13, 2, 177-184

» [17]

In this work, optimum value of glucose ( limiting reactant) concentration was found and Monod kinetics were investigated. Optimum glucose concentration was determined as 30 g/L and used in the runs for temperature effects. In order to investigate the effect of temperature on bioconversion, experiments were carried out at different temperatures. The optimum temperature value was found as 32°C and maximum specific growth rate and microorganism concentration were determined as 0.514 h<sup>-1</sup> and 6.85 g/L , respectively. At the optimum temperature bioreaction was carried out at optimum temperature and glucose concentration. At the end of the bioconversion, the temperature of growth medium increased 2.5°C approximately. In order to control bioreactor temperature, PID control method was used.  $K_C, \tau_I, \tau_D$  parameters were calculated and used in the control algorithm. According to on-line computer control results, microorganism concentration increased by 14 % under temperature controlled conditions compared to open-loop (uncontrolled) operation.

Keywords: Bioprocesses, PID control, *S.cerevisiae* production.

[17]

Ertunç S., Akay B., Hapoğlu H., Albaz M. (2001)  
"Kesikli Biyoreaktörde *S. Cerevisiae* (NRRL Y-567) Mikroorganizmasının  
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