

The following is a 'mock assignment', i.e. NOT the real thing. However, the real thing will look very similar. As a next main topic you will find in a few days both, a solution in terms of results, as well as a Wimba demonstration (guiding you through the process).

Due: the 'real assignment' will be posted in due course; the mock version comes close to a 'clone' of the real thing; solution for the mock version is already posted.

This assignment starts by describing the scenario of a project. In a second step it identifies the various ingredients required for the project and their unit costs. (The information included in this table you find repeated in the attached spreadsheet.) In a third section the *assignment-tasks* are specified. These tasks mainly consist of simple calculations *to be completed according to the cost-analysis outlined in the textbook*. For completing them, please use the specified cost data provided even if they do differ from costs you know from your context. **Include references** to the textbook of G. Rumble to justify your solutions where appropriate. This applies especially to tasks 6 and 13 where you have to discuss the issue of annualization (task 6) and to summarize the argument in favor of the cost-efficiency of distance education (task 13).

The scenario

An undergraduate distance education college plans to offer an undergraduate course in *American Literature*. The course is a three credit course and requires about 150 hours of study time (15 weeks at 10 hours per week). The course will be offered once a year.

Course material: the course is mainly print-based. The course material is written by a consultant who is a renowned expert in the field. It consists of **fifteen** study guides of about 50 pages each and **one** additional reader (200 pages). Layout and design of the study guides and clearance of copy right will be done in-house. Together with the study guides come **ten** 60 min audio tapes with samples of American literature read by a professional. The development process extends over **two** years and will require a **sixth** of the per annum staff-time of a course manager and a **quarter** of a full time commitment of one secretarial staff. The management input and the secretarial support will continue at the same rate over the six years the course is presented.

The course is planned to be on offer for **six** years and is expected to attract **150** students per year. It is planned to update the course in year 3 and to present from year 4 onwards the re-developed version.

Student support: Students are supported by a tutor. The tutor will extensively comment on and mark **seven** essay-type assignments during the course. There will be an online forum for which 60 hours of tutorial time are calculated. In addition the tutor is provided with a lumpsum for additional student related expenses for each group of 25 students ('tuition expenses').

Assessment: The student will be assessed on the basis of the seven essays which will be marked by the tutor.

Use the following specifications of costs for your cost-analysis:

The ingredients and their costs

1	Input	Unit of input	Amount of input	Cost per unit of input
2	<i>Course overheads</i>			
	Course manager	per annum salary	1/6 of full-time post (ongoing)	\$75000
	Secretarial support	per annum salary	1/4 of full-time post (ongoing)	\$32600
	<i>Development</i>			
3	Course manager	per annum salary	1/6 of full-time post p.a. over two years of development	\$75000
4	Secretarial support	per annum salary	1/4 of full-time post p.a. over two years of development	\$32600
5	Printed material			
6	Authoring study guides	per study guide (=50 pages)	fifteen	\$2500
7	Editing course	per reader (=200 pages)	one	\$3000

	reader			
8	Editing and design	per unit of 50 pages	nineteen (which includes the reader with 4 x 50 pp)	\$900
9	Copyright clearance	per unit of 50 pages	nineteen (which includes the reader)	\$1200
10	Cassettes			
	Development of audio cassettes	per 60 min tape	ten	\$1500
11	Professional speaker	per 60 min tape	ten	\$800
12	Production	per 60 min tape	ten	\$900
13	Assignment			
14	Development of assignment	per assignment	seven	\$350
15	Maintenance (part of printed material only)			
16	Author	per study guide (updating)	three	\$1500
17	Editing and design	per study guide (updating)	three	\$900
18	Presentation costs			
19	Student support			
20	Marking of assignment	per assignment	seven	\$40
21	Tutor	per hour of seminar of group size of	sixty	\$25

		25		
22	Tutor expenses	per group of 25	one	\$70
23	Production			
24	Production of study guide	per study guide	fifteen	\$9.50
25	Production of assignments	per supplementary unit	seven	\$3.20
26	Production of course reader	per reader	one	\$14.00
27	Production of cassette	per cassette	ten	\$9.60
28	Packaging and postage	per mailing	three	\$19.80
29	Income			
30	Fee	per student per credit point	three	\$395

The Task

Based on the above figures and the scenario, please, answer the following questions. Include references (not lengthy quotations) to sections of the textbook to support your argument where appropriate.

1. Classify the different cost items as either fixed or variable costs (matching row number to Fixed or Variable as appropriate) AND as capital or recurrent costs.
2. Calculate the *Recurrent Fixed Costs* of course overheads (management and secretarial support).
3. Calculate the aggregate *Fixed Costs of Development* (FD) and the aggregate *Fixed Costs of Maintenance* (FM).

4. Calculate the variable cost per student (V)
5. Calculate the depreciation rate on a basis of the lifetime of the presentation of the project (compare Rumble Table 6.1) and charge it to each year of presentation. (You may use the format of the attached spreadsheet.)
6. Following the template of Rumble Table 6.4, annualize the *Fixed Costs of Development* (FD) over the six years of presentation at 7.5% interest and the *Fixed Costs of Maintenance* (FM) over four years at the same rate.
7. Summarize in a short paragraph the reasons for and against annualization.
8. Calculate the equation of *total costs* ($TC=F+VxN$) using the annualized figure of fixed costs and $N=900$
9. Draw the graph of the total cost function using, as above, the annualized figure of fixed costs while N varies over the accumulated number of students (i.e. $N=150, 300, 450$ etc.)
10. Calculate the equation of *average costs* ($AC=F/N+V$) using the annualized figure for fixed costs and $N=900$
11. Draw the graph of the average cost function, using, as above, the annualized figure of fixed costs while N varies over the accumulated number of students (i.e. $N=150, 300, 450$ etc.)
12. If the student is charged the per student fee specified calculate the *break-even point*. (Use the equation $TC=F+VxN$ and the income equation: $I=SFxN$ (Income = Student Fee x No of students). The break-even point is $N=F/(SF-V)$)
13. Represent the break-even point graphically (overlying the graphs of TC and I).
14. Summarize in a short paragraph why it is believed that the TC and AC equations and the specific cost structure of DE suggests that DE may be more cost-efficient than conventional modes of educational provision.

Note that you need to attach an Excel file to show your calculation. You find an Excel file attached which you may use as template. Make sure that your calculations are reflected in the Excel sheet. However you need to summarize your answers to the 13 questions in a separate text file.