



IN SEMESTER (INDIVIDUAL) ASSIGNMENT 2

Module Code: BUSS- B - 2001

Module Name: Principles of Logistics

Level: 2

Max. Marks: 100

Instructions to Student

- Answer *all* questions.
- Deadline of submission: 17/01/2021 23:59
- The marks received on the assignment will be scaled down to the actual weightage of the assignment which is 50% marks
- Formative feedback on the complete assignment draft will be provided if the draft is submitted at least 10 days before the final submission date.
- Feedback after final evaluation will be provided by 25/01/2021
- Maximum word limit: 2000 words.

Module Learning Outcomes

The following LOs are achieved by the student by completing the assignment successfully

3. Apply the integral logistic model in a practical situation
4. Discuss logistic problems and solutions with fellow student and lecturers
5. Work in a team and achieve results in a project /assignment

Assignment Objective

This assignment aims to develop the overall basic knowledge related to Logistics and Supply Chain Management, which can be applied in understanding the further advance concepts of Logistics and Supply Chain Management.

Assignment Tasks

1) Task 1 - Submit a work proposal for this assignment on or before 26/11/2020 (23:59) which must include: (10 Marks)

- Understanding of deliverables – a detail description of deliverables.

- General overview of proposed plan - initial understanding of solution to task2.
- Timeline for completion of the given tasks.

The work proposal must be submitted in a word file through the link available in Moodle.

2) Task 2: Case studies (Ex 1 and 2)

(70 Marks)

Exercise 1: Transport Planning (The work of a transport planner)

(30 Marks)

The company Visstick BV.

In this exercise, you will be working as a transport planner for the company 'Visstick BV' in Apeldoorn (NB: postcode 7314). The company Visstick BV is a wholesaler in frozen fish fingers. The products have to be delivered in refrigerated trucks. The hotter the weather, the more energy it takes to keep the products cold. The variable costs therefore go up when the outdoor temperature goes up. The customers of Visstick BV get their goods delivered in whole pallets. Visstick BV transports the products to the customers itself. They use a very large and modern fleet of delivery vehicles for this. They have 4 trucks that can carry up to 10 pallets and 2 trucks that can carry up to 6 pallets. The company has six full-time drivers, who can be assigned to work in the warehouse or the production department when they do not have to drive.

Because business is going so well, Visstick BV has been granted an exemption under the regulations on driving times and rest periods for truck drivers by the National Vehicle and Driving Licence Registration Authority (RDW). As compensation for having to work longer hours, the drivers get 10 extra days' holiday. Furthermore, the employer wants the trucks to be loaded at night time so they are ready to leave at 07.00 hours the following morning.

Although the trucks are very new, the trucks can only drive at an average speed of 60 km per hour. The costs of the trucks per km are variable (including diesel fuel, servicing, etc.). The fixed costs for a small truck are € 35 per work day and for a big truck € 50 per work day (including interest, depreciation, insurance, motor vehicle tax etc.). The drivers cost € 30 per hour, and the rest periods are paid. The drivers have to unload the cargo themselves, which takes on average 10 minutes per pallet. The company has asked the NHTV if some of its students can draw up a planning schedule.

For this exercise, we will use the figures for a day in September when the temperature is "13 oC". The information provided by "Visstick" is included in the appendix.

Question 1: Make a planning schedule so that the journeys can be made to all the customers (listed in Appendix 1) at the lowest possible cost.

In connection with the complexity of the case, several factors have been ignored:

- The mandatory rest periods a driver has to take in accordance with statutory regulations.
- Any delivery windows specified by the customers of “Visstick BV”.
- Any loading of goods during a journey can be calculated using the same time and cost for unloading.
- Any higher or lower average speeds in different parts of the Netherlands, for example because of traffic congestion on the motorways, or due to more or less driving in urban areas.

Please note: any ‘savings’ because the drivers do not have to drive so much can be included in the calculation! The wage costs of a driver are then not booked under ‘transport’, but under another cost item.

Tips:

- Read the instructions above carefully. Draw up a list of all the information you need for each journey. Study the appendix!
- The costs of a driver are very high for transport by truck. Take this into account. For example, if you use a truck with a load capacity of 5 pallets for two journeys, then it would be cheaper to combine these journeys into a single journey with a truck that has a load capacity of 10 pallets (because you only have to pay the labour costs once). However, make sure this is possible under the regulations on driving times and rest periods for truck drivers.

The variable costs are:

Outdoor temperature	Costs Small Truck	Costs Big Truck
0-5 oC	€ 0.60 per km	€ 0.70 per km
6-10 oC	€ 0.65 per km	€ 0.75 per km
11-15 oC	€ 0.70 per km	€ 0.80 per km
16-20 oC	€ 0.75 per km	€ 0.85 per km
21-25 oC	€ 0.80 per km	€ 0.90 per km

Appendix 1: Delivery details

Postcode	Place	Quantity (in pallets)
1447	Purmerend	2
2013	Haarlem	1

2724	Zoetermeer	1
3454	De Meern	2
3772	Barneveld	2
3882	Putten	2
4007	Tiel	1
5046	Tilburg	2
5152	Drunen	1
5341	Oss	1
5613	Eindhoven	3
5831	Boxmeer	1
6662	Elst (Gld)	2
6952	Dieren	1
7251	Vorden	1
7314	Apeldoorn	Begin and End
7412	Deventer	1
7609	Almelo	2
7742	Coevorden	2
7815	Emmen	1
8012	Zwolle	1
8171	Vaassen	1
8252	Dronten	1
8302	Emmeloord	1
9207	Drachten	2
9354	Zevenhuizen (Gr)	1

Exercise 2: Warehouse Layout and Design

(40 Marks)

In this exercise, we will be looking at the design and layout of a warehouse in more detail. The exercise will look at the company Compu, a medium-sized company that manufactures computer components, such as monitors, keyboards, HD recorders, processors, and computers, etc.

They make different versions of most of their products, so that each product comes in a B1, B2, and B3 version. This same applies for the other products.

Just like many other small and medium-sized companies, the warehouse manager decides where the articles have to be stored. There is not a fixed procedure or system for this. This means that order pickers often have trouble finding a product and have to go and find the warehouse manager to ask him where it is. Sometimes the same products are put in different places around the warehouse. Consequently, when one pallet is empty, the order picker has to go to the other side of the warehouse to complete the order.

Up until now, this situation has never caused any major problems. The warehouse manager has everything under control and there are hardly ever any errors in the deliveries. Nonetheless, the logistics manager is very concerned that this system will eventually cause big problems in the future. He is concerned for two reasons. First of all, the warehouse manager is over the age of 60. It won't be long before he will retire. The warehouse manager is often the only one who knows exactly what, how much, and where everything is in warehouse. When he retires, all that knowledge will be lost. The warehouse manager was not at work last week because he was ill, and the warehouse workers had to call him up several times a day.

The second reason is the growing demand for the products of Compu. The logistics manager is afraid that if the company continues to grow, then it will be impossible for just one man to keep track of all the stock information. The logistics manager and the managing director expect to see a sharp rise in sales as early as this summer.

In order to prepare for these eventualities, the logistics manager starts to work out a solution in June. He wants to organize the warehouse in a different way so the order pickers don't get in each other's way, and above all to make sure they have to travel the shortest possible distance. He can use the following data for this.

There are three types of monitors: B1, B2 and B3. B1 costs €185, B2 costs €300, and B3 costs €250. The sales figures for these flat screen monitors are as follows.
B1: 19235, B2: 10728, and B3: 4344.

The keyboards are manufactured in two types (one wired and one wireless): T1 and T2. The T1 costs €49 and the T2 costs € 149.
The sales figures for the keyboards are as follows. T1: 35781, T2: 14567.

The HD DVD players are available in three types.
The D1 costs €195 and 5910 have been sold, the D2 costs €295 and 1415 have been sold.
The D3 is almost the same as the D2, but with the D3 you can burn your own DVDs as well.
The D3 costs €999 and 233 have been sold.

Compu makes two types of high-speed processors. The P1 costs €499 and the P2 costs €999. The annual sales figures for these products, which are rather low, are as follows. P1: 988, and P2: 451

The computers come in five models. The C1 is a very basic model and you can only connect one type of monitor to it (the B1), and the C1 therefore only costs €385. It has been a flop and only 6156 have been sold. The C2 and C3 are home/office computers and look more professional. The C2 costs €725 and 28345 have been sold. The C3 is almost the same as the C2, but the C3 has a D1 DVD player and therefore costs more. It costs €925 and 32379 have been sold.

The C4 and C5 are powerful computers with ultra-fast processors that are mainly sold to big companies.

The C4 is fitted with the P1 processor, costs €6999, and 674 have been sold.

The C5 is fitted with the P2 processor, costs €3999, and 721 have been sold.

All prices and sales figures are per package in which they are sold. These are therefore the figures that have to be used. The logistics manager wants to design a logical layout for the warehouse based on an ABC analysis. The managing director has also got involved with the problem of the warehouse design. He has heard about the 80/20 rule. He wants to use this method, but only if it is exactly 80/20, otherwise it won't work according to him. The managing director also wants the calculations to be based on the value of the turnover, in other words the value of the products. *“You have to take special care of the expensive articles,”* he says. The logistics manager does not agree. He says the layout of a warehouse has to be based on an ABC analysis using the sales figures.

Question 2

(15+20+5=40 Marks)

- a) What is an ABC analysis, and how can you use it to design the layout of a warehouse?
- b) Make two calculations for the ABC analysis: one using the sales figures and the other using the turnover figures. Do they satisfy the 80/20 criterion? (Tip: draw up a list of the figures you need first, think carefully about what these figures mean, what you need to do next, and what figures you already have.)
- c) The logistics manager and the managing director disagree about whether the ABC analysis should be carried out using the sales figures or the turnover figures. Who is right if you look at the purpose of the analysis?

3) Task 3: Completion of MOOC course

(10 Marks)

MOOC link: <https://www.mooc-list.com/course/supply-chain-management-be-global-coursera>

You need to write a reflection (**Word range 75-100 words**) on what it was about and what was the learning you achieved. How is the course useful for your career and life? What are the challenges you faced in completing this course can be mentioned also. You need to **attach screenshots** of the course completion or the certificate as an evidence.

❖ **Formatting, references, adherence to word limit and students declaration for course work** **(10 Marks)**

Rules & Regulations:

- All resources should be cited using CU Harvard style. (Minimum 10 References)
- The final assignment must have a Title page, Table of Contents, References/ bibliography using CU Harvard Style and page numbers.
- Title Page must have Assignment Name, Module name, Session, your name, ID, and the name of the faculty.
- Softcopy in word format is to be submitted through Turnitin link on Moodle.
- Viva will be conducted after the assignment submission as per the dates informed earlier.

Guidelines:

- Assignment must be computer typed.
 - Font - Times New Roman
 - Font – Style - Regular
 - Font - Size - 12
 - Heading should be with Font Size 14, Bold, Capital and Underline.
- Explain with suitable diagrams wherever required. Diagrams must be drawn using suitable software or by pencil.
- Each student has to do the assignment individually
- You can refer books in E-Library or use internet resource. But you should not cut and paste material from internet nor provide photocopied material from books. The assignment answers should be in your own words after understanding the matter from the above resources.

Assessment Evaluation Criteria

Classification And % Range <to be given as per requirement>	Reflection and critical analysis.	Knowledge and Understanding/ Application of Theory	Evidence of Reading	Referencing and Bibliography	Presentation, Grammar and Spelling
Outstanding 91-100	Highly competent analytical skills and reflective practice, demonstrating personal learning and growth, insight into required professional values and principles and professional development planning.	Extensive knowledge and depth of understanding of principles and concepts and /or outstanding application of theory in practice.	Evidence of reading an extensive range of educational literature/research and where applicable workplace strategies, policies and procedures.	Accurate referencing and bibliography correctly using appropriate referencing style	Excellent presentation, logically structured, using correct grammar and spelling, excellent cross-referencing and links to supporting evidence
Excellent 81--90	Strong analytical skills and reflective practice used, demonstrating personal learning and growth, insight into required professional values, principles and competencies and professional development planning.	Excellent knowledge and understanding of principles and concepts and /or excellent knowledge and understanding of the application of theory in practice	Evidence of reading a wide range of educational literature/research and where applicable, workplace strategies, policies and procedures.	Appropriate referencing and bibliography correctly using appropriate referencing style	Good presentation, competently structured, using correct grammar and spelling, clear and easy to use links to supporting evidence
Very Good Quality 71-80	Good use of analytical skills and reflective practice demonstrating personal learning and growth, insight into required professional values, principles and competencies and professional development planning.	Good knowledge or key principles and concepts and/or good knowledge of the application of theory in practice	Evidence of reading a good range of educational literature/research and where applicable workplace strategies, policies and procedures.	Generally well referenced with correct use of the appropriate referencing style	Reasonable presentation, completely structured, acceptable grammar and spelling, acceptable links to supporting evidence
Good (Acceptable) 61-70	Acceptable use of analytical skills and reflective practice demonstrating personal learning and growth, insight into required professional values, principles and competencies and professional development planning.	Acceptable knowledge of key principles and concepts and/or knowledge of the application of theory in practice	Evidence of reading an appropriate range of educational literature/research and where applicable, relevant workplace policies and procedures	Adequate referencing. Generally accurate use of appropriate referencing style	Adequate presentation and structure, acceptable grammar and spelling, adequate links to supporting evidence
Adequate/ Satisfactory 51-60	Adequate use of analytical skills and reflective practice demonstrating personal learning and growth, insight into required professional values, principles and competencies and professional development planning.	Adequate knowledge of key principles and concepts and/or satisfactory evidence of the application of theory in practice.	Evidence of minimal reading of educational literature/research and where applicable relevant workplace policies and procedures	Adequate referencing. Appropriate referencing style used but may contain some inaccuracies.	Weak presentation , satisfactory structure, grammar and spelling, links to supporting evidence
Weak /Poor (all learning outcomes not adequately met) 0-50	Little use of analytical skills and reflective practice demonstrating personal learning and growth, insight into required competencies and/or professional development planning. Professional values and principles not reflected in the submission. and/or Insufficient/no use of analytical skills and reflective practice demonstrating personal learning and growth, insight into required competencies and professional development planning	Little evidence of knowledge of key principles or concepts and/or little evidence of the application of theory in practice and/or No evidence of knowledge of key principles or concepts and/or no evidence of application of theory in practice	Little or no evidence of reading outside of the course textbook and/or reference to relevant workplace policies and procedures and/or No evidence of reading outside of the course textbook and/or reference to relevant workplace policies and procedures	Little or no referencing, incorrect style, or very inaccurate use of appropriate referencing style	Poor presentation, grammar and spelling, links to supporting evidence and/or Unacceptable presentation, grammar and spelling, structure is very poor, links to supporting evidence

Important Policies to be followed

1. Student Academic Integrity Policy*:

- MEC upholds the spirit of academic integrity in all forms of academic work and any form of violation of academic integrity shall invite severe penalty. Any benefit obtained by indulging in the act of violation of academic integrity shall be cancelled.
- MEC also reserves the right to notify the appropriate law enforcement authorities of any unlawful activity and to cooperate thereafter in any investigation of such activity.
- Faculty can conduct a viva to investigate and ascertain that the work submitted is student's own work as per the guidelines for the same. **A student can be given a maximum of 2 chances to attend the viva in such cases. It is expected that the student attends the viva during the first chance itself unless due to extenuating circumstances. If the student does not attend the viva in spite of being given 2 chances and fails to submit valid reasons, he/she will be awarded a fail in the module and this shall be counted as a case of academic integrity violation.**

All cases of violation of academic integrity on the part of the student shall fall under any of the below mentioned categories:

1. Plagiarism
2. Malpractice
3. Ghost Writing
4. Collusion
5. Other cases

If the student fails a module and has a proven case of academic integrity violation in this module, the student is required to re-register the module. This is applicable to first and second offence of academic integrity violation of plagiarism type

1.1. First Offence of Academic Integrity Violation:

1.1.1. Plagiarism

- a. If a student is caught first time in an act of academic integrity violation during his/her course of study in any assignment other than project work and if the type of violation is plagiarism, then the student will be allowed to re-submit the

assignment once as per the period allowed for re submission However, a penalty of deduction of 25% of the marks obtained for the resubmitted work will be imposed.

- b. Period of re-submission: The student will have to re-submit the work within one week (5 working days) from the date he or she is advised to re-submit.
- c. Re-submission of the work beyond the allowed period of resubmission will not be accepted and the assessment will be awarded a zero mark.
- d. If the re-submitted work (within the allowed period of resubmission) is also found to be plagiarized, then that assessment component will be awarded a zero mark. It shall also contribute to the total count of academic integrity violation for that student.
- e. If plagiarism is detected in UG Project work (Project 1, Project Planning and Project Design and Implementation), the above clauses do not apply, and the work will be summarily rejected. In these cases the student will be awarded a fail (F) grade and is required to reregister the module.

1.1.2. Malpractice / Ghostwriting / Collusion

If a student is caught first time in an act academic integrity violation during his/her course of study for an assessment component irrespective of coursework or end semester and if the type of violation is Malpractice/Ghostwriting/Collusion, then the student shall fail the module.

1.2. Second Offence of Academic Integrity Violation:

1.2.1. Plagiarism

- a. If any student is caught second time in an act of academic integrity violation during his/her course of study and if the type of violation is plagiarism, then the student will not be allowed to resubmit the work, and s/he will directly be awarded zero for the work in which plagiarism is detected.
- b. The student shall also receive a warning of suspension in such cases.

1.2.2. Malpractice/Ghostwriting/Collusion

- a. If a student is caught a second time in an act academic integrity violation for an assessment component irrespective of coursework or end semester and if the type of violation is Malpractice/Ghostwriting/Collusion, then the student shall fail the module.
- b. The student shall also receive a warning of suspension in such cases.

1.3. Third Offence of Academic Integrity Violation:

- a. If a student is caught a third time in an act of academic integrity violation for an assessment component irrespective of coursework or end semester then the student shall fail the module and also shall be suspended for one semester from the College, once the academic integrity violation case is confirmed by Institutional Assessment Review Committee.
- b. The student shall be suspended for the immediate subsequent semester and can register for modules only after having served the suspension period fully. This is also applicable for semesters offered in block mode.
- c. During the suspension period, the student shall have to mandatorily complete a course on academic integrity/writing before s/he can register for any modules.
- d. During the period of suspension, the student shall be allowed to attempt supplementary examinations if s/he is eligible for the same. S/he shall also be allowed access to all college facilities permitted for a regular student except for registering the modules.

1.4. Fourth Offence of Academic Integrity Violation:

- a. If a student is caught a fourth time in an act of academic integrity violation for an assessment component irrespective of coursework or end semester, the student shall fail the module and also shall be expelled from the College, once the case is confirmed by Institutional Assessment Review Committee.
- b. The student shall be expelled from the college and all access to the college facilities and premises shall cease to exist. The documents shall be released only after getting the NOC (No Objection Certificate) from Registration Office.
- c. `On termination, the student shall not be refunded any fees paid for the academic semester in which academic integrity violation was observed.

1.5. Other cases

If a student commits an act of academic integrity violation as per the definition of “other cases” mentioned in the previous section or of a different nature, student’s case shall be forwarded to an Institutional Assessment Review Committee, Chaired by the Associate Dean, Academic Affairs. The committee shall investigate the case by means of a viva and/or a hearing of the parties concerned if required and shall take appropriate decision. The penalty that can be granted to a proven case of academic integrity violation which falls in this category of “other cases” can be a warning/component zero/ module fail/suspension/expulsion depending on the nature and gravity of the offence.

1.6. Types/Variations of cases of Plagiarism and associated actions

Type 1: In case plagiarism is detected in any component or part submission (submitted at different times) of one assessment (assignment), the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted.

Type 2: In case plagiarism is detected in a group assessment, all students of the group will be considered as having committed an act of plagiarism irrespective of whether plagiarism is on

account of the act of all or a few or only one member. The policy will then be applied to all students.

If some students in the group are eligible to re-submit (first offence) and others are not eligible, only eligible students will be allowed to re-submit within a period of one week and the penalty will be applied as per the policy for each student according to his / her history of violations.

Type 3: Combination of Type 1 and Type 2: In case plagiarism is detected in any component or part submission (submitted at different times) of a group assessment (assignment), the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted. All students of the group would be considered as having committed an act of plagiarism irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all the students of the group.

If some students in the group are eligible to re-submit (first offence) and others are not eligible, only eligible students will be allowed to re-submit within a period of one week and the penalty will be applied as per the policy for each student according to his / her history of violation.

Type 4: Variation of Type 1 and Type 2: In cases where the assessment consists of components or part submissions that could be a group assessment component (e.g. group assignment) and an individual assessment component (e.g. individual reflection), the following will be applicable:

- a. If plagiarism is detected in the group assessment component, all students of the group will be considered as having committed an act of plagiarism, irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students of the group. In such cases the group assessment component will be resubmitted.

If some students in the group are eligible to re-submit (first offence) and others are not eligible, only eligible students will be allowed to re-submit within a period of one week and the penalty will be applied for each student according to his / her history of violation.
- b. If plagiarism is detected in the individual assessment component, the individual assessment component will be resubmitted - if the student is eligible for resubmission-. The policy will then be applied to that student alone.
- c. In both cases (a) and/or (b), the deduction in marks will be applicable for the whole assessment (assignment).

1.7. Types/Variation of Cases of Multiple Offences

If student is caught with multiple violations of same or different nature in different modules of the same semester, they will be considered as one offence and student will be penalized for each violation according to the type of the offence.

If student is caught with multiple violations of same or different nature in the same module of the same semester, then they will be considered as different offences and each will contribute to the overall count of AIV. The student then shall be penalized for each violation according to the count and type of each offence.

** For further details Refer to MEC Student Academic Integrity Policy in Student Handbook.*

2. Late Submission Regulations:

It is the students' responsibility to check all relevant timelines related to assessments.

As per the Assessment Policy at MEC, late submissions are allowed for one week (5 working days) for all UG modules with a penalty. In such cases, a deduction of 5% of the marks obtained for the submitted work shall be imposed for each working day following the last date of submission till the date of actual submission. Assessment documents submitted beyond a period of one week (5 working days) after the last date of submission will not be accepted and will be awarded a zero for that assessment. In cases where the submission has been delayed due to extenuating circumstances, the student may be permitted to submit the work without imposing the late submission policy stated above. The extended period of submission will be one week from the original last date of submission. In such cases, the student is expected to submit the supporting certificates on or before the original last date of submission of the assessment and the decision of extension rests with faculty responsible for the assessment. The late submission policy shall be applied if the student fails to submit the work within one week of the original last date of submission.

Students may contact their teachers for clarification on specific details of the submission time if required.

3. Research Ethics and Biosafety Policy

To protect and respect the rights, dignity, health, safety, and privacy of research subjects involved including the welfare of animals and the integrity of environment, all student projects are expected to be undertaken as per the MEC Research Ethics and Biosafety Policy. Accordingly the following shall apply.

- Research and other enterprise activities shall be conducted by maintaining the high ethical standards consistent with national and international standards and conventions.
- Any research at MEC that is categorized as high-risk research shall be subject to review and approval by the Research Ethics and Biosafety Committee.
- Research activities involving collection of human or animal tissues and manipulation of microbial, animal or plant cells shall be subject to review and approval by the Research Ethics and Biosafety Committee.

- Participants involved in research must be informed about the purpose of research and intended uses of research findings. Written consent must be obtained from people involved prior to the commencement of research.
- Data obtained from participants must be treated with high confidence and should be used only for the intended purpose of research.