

# **School of Management**

# MGMT 314 OPERATIONS AND SUPPLY CHAIN MANAGEMENT

Trimester 2, 2016

## **COURSE OUTLINE**

#### NAMES AND CONTACT DETAILS

**COURSE COORDINATOR:** Vipul Jain

**OFFICE:** RH 919, Rutherford House

**PHONE:** 463 5145

EMAIL: Vipul.Jain@vuw.ac.nz

(I strive to respond as soon as practical but always within one business day barring unforeseen circumstances)

**OFFICE HOURS:** Tuesday Wednesday 10AM – 11.00 Noon (RH 919), and other times by appointment; and ongoing by email (please set your e--mail account or client to copy back prior messages when replying or forwarding). Email is the best way to communicate with me.

Tutor: Bronwyn Howell Undergraduate Programme Manager: Garry Tansley

Room: RH 929, Rutherford House Room: RH 915, Rutherford House

Phone: 463 5563 Phone: 463 6968

Email: Bronwyn.Howell@vuw.ac.nz Email: Garry.Tansley@vuw.ac.nz

**Administrator:** Misa Ito

Room: RH 1022, Rutherford House

Phone: 463 5397

Email: Misa.Ito@vuw.ac.nz

#### **Class Times and Room Numbers**

Lectures: Friday, 10:30 - 12:20 GB LT3

## **Prescription**

The course examines and analyses the processes, supply chains and operational systems that determine the value added by a firm's primary products and services. It prepares future managers across every sector of the economy to lead, organise, plan and control a set of resources, in pursuit of identified goals.

## **Course Learning Objectives**

The purpose of the course is to develop an in-depth understanding of integrative managerial issues and challenges related to operations in developing and implementing a firm's supply chain strategy.

This course will examine the concepts and techniques utilized in the management of manufacturing and service operations and its impact on global supply chains. Supply chain logistics is positioned as a value-adding process that achieves time and place synchronization of demand stimulation and order fulfilment. Emphasis will be placed on challenges related to providing a supply chain infrastructure for various operations in procurement, manufacturing and market distribution. The topics to be covered span - supply chain strategy, segmental positioning, service provider relationship development and maintenance, value-added services, sustainability, forecasting and collaborative planning, order management, transportation, inventory, warehousing and materials handling. The course will conclude with emphasis on facility network design, risk management and integrated performance measurement.

By the end of this course, students should be able to:

- Develop an understanding of fundamental building blocks, models and key decisions in managing operations and their interrelationships with other business functions of a business organization;
- Understand the strategic role of operations management in creating and enhancing a supply chain's competitive advantage;
- Use supply chain management terminology and be able to explain supply chain principles, concepts and strategies related to supplier relationships, distribution, outsourcing etc.
- Develop an understanding of the importance of supply chain logistics in the formation of business strategy and the conduct of supply chain operations.
- Evaluate the challenges and opportunities in managing risk, and attaining sustainable operations in different settings supply chain settings;
- Become familiar with important qualitative and quantitative tools necessary to design and optimize the supply chain;

This course will further enhance the student's abilities to function as part of the management team in supply chain management oriented organizations.

## **Course Content**

This course will develop a basic understanding of operations and supply chain management both within and beyond organizational boundaries. It will provide the conceptual and analytical framework for the materials management function of business including Source, purchasing, inventory management, capacity planning, scheduling, and manufacturing planning and control systems; as well as a broader supply chain view. The significant elements of the supply chain include: the management of suppliers (internal or external); Inbound logistics; Process logistics; Outbound logistics to customers (and returns), and Customer management. The course focuses on the basic concepts, issues, and techniques for efficient and effective supply chain operations.

#### **Trimester Dates**

Teaching Period: Monday 11<sup>th</sup> July – Friday 14<sup>th</sup> October Study Period: Monday 17<sup>th</sup> October – Thursday 20<sup>th</sup> October

Examination Period: Friday 21st October – Saturday 12th November (inclusive)

## **Withdrawal from Course**

- 1. Your fees will be refunded if you withdraw from this course on or before Friday 22<sup>nd</sup> July 2016.
- 2. The standard last date for withdrawal from this course is Friday 23<sup>rd</sup> September 2016 After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an 'Application for Associate Dean's Permission to Withdraw Late' including supporting documentation. The application form is available from either of the Faculty's Student Customer Service Desks or online.

#### **Course Delivery**

My teaching philosophy is based on the belief that learning is an active process. To be successful in learning the concepts, you must be actively engaged in the material. The course will be based on interactive lectures, cases, discussion, presentation and exercises. Students are expected to participate, interact and behave in a manner consistent with business managers and professionals. The course would aid in the development of a problem solving analytical approach among students and they will be exposed to the business application of the concepts throughout the course. Students would be encouraged to work individually as well as in teams. Students, for this course, will form teams of 4/5 students for Team Assignments and Team Learning. The course will require a strong emphasis on dialogue and student participation in discussion. To get the most out of this course, students need to participate actively in these discussions. Participation requires preparation before class, attendance in class, and presentation of the ideas to the class. The case analysis will help students develop their ability to think strategically and solve problems. Through applying the conceptual material to the cases, students will learn how to recognize business opportunities and problems, acquire and interpret information effectively, develop creative alternatives, consider the relevant constituencies, and make decisions that consider short- and long-term outcomes.

## **Readings**

The lecture slides are very exhaustive and in-depth. These lecture slides will be posted before the lecture. However, the following books are recommended for further reading:

- Bowersox, Closs, Cooper and Bowersox (2013) Supply Chain Logistics Management, 4th Edition, McGraw Hill.
- Sunil Chopra, Peter Meindl, D.V.Kalra, 6th edition, 2016, Supply Chain Management: Strategy, Planning, and Operation, Pearson Education, New Delhi
- Jacobs, F. R. and Chase, R. B. (2013) Operations and Supply Chain Management: The Core, 3<sup>rd</sup> edition, Boston, MA: Irwin McGraw Hill
- Michael, H, Hugos, (2011) Essentials of Supply Chain Management, Third edition, Wiley
- Janat Shah; (Supply Chain Management-Text & Cases, Pearson Education, New Delhi
- Simchi-Levi, Kaminsky and Simchi-Levi (2005) Designing and Managing the Supply Chain 2<sup>nd</sup> Edition, McGraw Hill.
- Martin Christopher (2013), Logistics and Supply Chain Management, Pearson UK
- Donald Waters and Stephen Rinsler (2014), Global Logistics: New Directions in Supply Chain Management, Kogan Page Publisher, UK
- Robert Handfiled and Ernest Nichols Jr. (2008), Introduction to Supply Chain Management, 2<sup>nd</sup> Edition, Prentice Hall, USA

## **Mandatory course requirements**

None.

If you cannot complete an assignment or sit a test or examination, refer to <a href="https://www.victoria.ac.nz/home/study/exams-and-assessments/aegrotat">www.victoria.ac.nz/home/study/exams-and-assessments/aegrotat</a>

#### **Expected Workload**

Workload expectations for this course are 10 hours per week, including both scheduled contact time (lectures and tutorials) and non-scheduled time for the 12 teaching weeks, and 30 hours during the mid-trimester break.

#### Assessment

The Assessment Handbook will apply to all VUW courses: see http://www.victoria.ac.nz/documents/policy/staff-policy/assessment-handbook.pdf.

#### **Course Assessment**

## **Group Term Project, Emerging Research Topics Project Paper, Tutorials and Final Exam**

Assignments	Value	Submission date
1. Group Term Project	20%	October 14 <sup>th</sup> by 3 PM
		(Last day of class)
2. Emerging Research Topics in Operations and Supply Chain Management Project Paper	20%	September 30 <sup>th</sup> (Friday) by 3 PM
3. Tutorial Participation	10%	
4. Final Examination	50%	Friday 21 <sup>st</sup> October – Saturday 12 <sup>th</sup> November (inclusive)

#### **GROUP TERM PROJECT (20%)**

This course focuses on the management of operations and supply chain that are used to deliver the product (either a good or service) to the customer. This group term project requires that a supply chain (Manufacturing or Service) be identified, flowcharted, and analyzed. Your group may choose one of the following three options.

**Option 1:** Choose a Service Industry (Hospital, Education Institutes, and Hotels etc.). Identify its supply chain and then document, flowchart and analyze the Service provider selection process in that particular service supply chain. For example (If you have selected Hotel Industry, then there can be services which are outsourced like Laundry, Catering, Security, Parking, Transportation etc). You need to identify in detail the key criteria for Service Provider selection for the considered Service supply chain and how this process of Service Provider selection is linked with the performance of the considered supply chain. The correlation (if any) which exists between the service provider selection and the performance of the considered service supply chain needs to be explored. You need to provide data to support your argument

**Option 2:** Choose an industry's or product's supply chain and then document, flowchart and analyze the supplier selection process in that particular manufacturing supply chain. You need to identify in detail the key criteria for supplier selection for the considered supply chain and how this process of supplier selection affects the performance of the considered manufacturing supply chain. The correlation (if any) which exists between the service provider selection and the performance of the considered manufacturing supply chain needs to be explored. You need to provide data to support your argument.

**Option 3:** Choose an existing operations or a process for providing a company's goods, and then flowchart the existing process or operations. (For example, a member of your group is responsible for using lean concepts in manufacturing; map the process of manufacturing, Identify the wastes, Use Lean-Six Sigma concepts and show improvement in the process/operations of the considered industry/supply chain)

The project is centered on a 20 minute presentation of your analysis to the class. Your analysis of the process should cover the <u>applicable</u> areas of operations and supply chain management. Including such items as:

- A detailed process flow chart including process inputs, process outputs, activities, activity times, processing and labour requirements.
- Suggested key criteria for service provider selection/supplier selection keeping in mind the particular industrial sectors.
- Capacity analysis of the process, including the strategies used to address expected customer demand.
- Suggested metrics used to measure supply chains performance, and how a changed process may improve them.
- Address other relevant issues as appropriate, such as:
  - 1. Customer demand and process capacity relationships
  - 2. How production is planned, from customer demand to production schedules
  - 3. Quality Management issues
  - 4. Product delivery issues
  - 5. Collaboration and coordination issues
  - 6. The interfaces of the process with both the external and internal customers
  - 7. Waiting line issues and related staffing decisions
  - 8. Other applicable process or supply chain management issues or concerns

You are free to choose your group and each group is expected to:

- 1. Name your group. Be innovative in naming. Innovation and out of the box thinking will be highly appreciable throughout the course. Provide a short written midterm report stating the option the group chose and the process they have chosen to analyze or design. Included should also be a preliminary project plan (what each team member is planning to do!), and any concerns that the group may have at that time. Due dates are on the course schedule.
- 2. Make a 15 minute (with an additional 5 minutes for questions) presentation of the project to the class. Your group will be given **no more** than 20 minutes for the presentation, so it is very important to plan what information you want your audience to receive. Present the big picture DO NOT read your slides to the class. A good rule of thumb is plan for 2 minutes per PowerPoint slide. Your presentation will be terminated after 20 minutes have passed!
- 3. Turn in PowerPoint slides (printed six to a page) plus full size process flow charts and tables. <u>Please no report covers (binders)!</u> Bring enough copies (in black and white only) for each class member and the instructor. Your must also send a soft copy to the instructor on or before the day of your presentation.

Term project reports are due on the last day of the class (October 14, 2016) (on a CD along with the data in Excel used for the project, power point presentation, business model developed, research articles, industry reports, etc.). Each group will provide contribution of members in the term project as part of report submission.

**Note:** Any project that is being used or has been used for credit in another class and is being used in whole or in part for this project needs to receive approval from the instructor. If it is currently being used as part of a project in another course both instructors must approve. Please ask if you are in doubt about the applicability of this note to your project.

#### **Term Project Report – Evaluation**

Some comments on how I will evaluate these reports may be helpful to you. I encourage you to write in manner that is appropriate to another person familiar and engaged with the industry. I will want certain characteristics:

- 1. The report should be anchored to an application of the principles we discussed in this course and covers the above listed issues.
- 2. Your report should be analytical rather than merely descriptive. This attribute is crucial.
- 3. It should be reflective in that you pull meaning from what you have observed and researched. It is this aspect, which will distinguish the best reports.
- 4. It should be clearly written. Clarity is more important than volume. I will not grade by the pound.

Note that all team members should be able to explain at a high level what was done, and be able to answer questions posed by the instructor and the class! It is unacceptable to simply present a project from work that was done by others. The presentation should make clear what was actually accomplished by each team member!

## **Emerging Research Topics in Operations and Supply Chain Management Paper (20%)**

A list of tentative emerging research topics in operations and supply chain management will be provided in the first lecture. Moreover, if you have some interesting topics the same can be discussed and added in the list of tentative topics. The team finalization will be done by the second session. It can be same team from the term project assignment or you are free to choose your own different team Again, name your team. Be innovative in naming your team. Innovation and out of the box thinking will always be appreciated throughout the course. Please note that you are not allowed to change your team members. The team can have maximum of 5 students.

- You are expected to explore the selected topic in detail- Understanding the basics and fundamentals associated with the selected topic
- Conduct literature review- You be explained in the class what Literature review is and how to conduct the same.
- Identify the current research/practise happening in the selected topic- Try to identify some research gaps after exploring the literature,
- Select a business organization and understand the challenges in managing the operations for the selected topic.
- Identify these challenges and recommend ways to overcome these challenges through the tools (quantitative and qualitative) studied in the course.
- Also suggest the future direction of research in the selected topic.

**For example:** For example one of the tentative topic can be:

"Service Operations Management: Potentials, Challenges and Future Research Directions" The things which should be addressed in the paper is as follows:

- What is Operations management? Definition with an example and brief overview
- What is Service Operations Management? Definition with an example and brief overview
- Explore Literature in Service Operations Management and try to identify the research gaps
- Identify a Service sector and illustrate what was the challenge/problems encountered in managing any one operations associated with that particular service sector. What makes service operations management a difficult or challenging task? Suggest ways (quantitative/qualitative) from the learning through the course to overcome that challenge and resulted in improving the performance of the considered sector.

- Some recommendations for the managers- how to manage the complexities and uncertainties in dealing with service operations. Advantages and even limitations and disadvantages of probability theory.
- Conclusion with some future recommendations highlighting the future research directions in service operations management.

For evaluation of the emerging research papers assignment, I will emphasize on the core understanding of the selected topic and its application in real life (manufacturing/service etc.) sectors to help the managers and practitioners in good decision making. The beauty of the concept should be visible along with its limitations and suggest new developments in these techniques (if possible) to help improving the decision making keeping in mind the uncertainties/dynamics in the environment.

## **Tutorials (10%)**

Tutorials will commence from the 3<sup>rd</sup> week of the classes. Tutorials will be series of case studies, which will be either posted in blackboard before or will be provided to you in the tutorial. These case study will be evaluated taking into account the originality of the recommendations, efficient and effective recommendations provided for the case questions. More details about the tutorials will be updated in the first session of the class.

## Final Examination (50%)

A three-hour final examination (closed book) will be held during the formal examination period. Students who enrol in courses with examinations are obliged to attend an examination at the University at any time during the formal examination period. The final examination for this course will be scheduled at some time during the following period:

Friday 21st October – Saturday 12<sup>th</sup> November (inclusive)

Students who enrol in courses with examinations are obliged to attend an examination at the University at any time during the formal examination period. The final examination for this course will be scheduled at some time during the following period:

#### **Handing in Assignments**

Assignments should be placed, in hard copy form, in the **MGMT 314 box no. 17** on the 1st floor of Railway West Wing by the due time on the due date.

## **Penalties**

Late assignments are to be handed in at Level 10 Reception, RH 1022, during Reception Desk hours, 9am till 5pm Monday to Friday during term time. An Administrator or Duty Receptionist will stamp the assignment with the date and time. Late assignments that do not have the time and date and signed by the Administrator for the course or Duty Receptionist, will incur late penalties from the time the Administrator receives it. Assignments left on the Reception Counter, or slid under the door of the Reception office will also incur penalties from the time and date they are recovered. Note that there is no provision to accept assignments on weekends or public holidays.

#### **Penalties – for Lateness**

(i) In fairness to other students, work submitted after any deadline will incur a penalty for lateness. **The penalty is 10% of the marks available** (marks available means what the assignment is worth i.e. 20% or 20 marks) for an assignment submitted after the due time on the due date **for each part day or day late.** (for example if an assignment is out of 20 and the

assignment receives 50% then one day late means the mark will be out of 18 and the student will receive 50% of 18). Closed University days, Saturdays, Sundays and public holidays will be included when counting the number of days late. An assignment late day begins from the time the assignment is due. Assignments received more than 7 days after the due date will not be accepted.

- (ii) Course Outlines provide a signal to students of forthcoming workload, dates of submission etc, and thus student study plans should take account of course requirements across all courses. Consequently, workload issues related to other courses and employment will not be accepted as reason for dispensation from mandatory requirements or waiver of penalties. **Extensions** to submission deadlines for any assigned work will only be granted in **exceptional circumstances.**
- (iii) Students who are unable to comply with any of the mandatory requirements should make a written application for an extension to the due date for submission of assigned work or for waiver of a penalty, **in advance**, to the **Undergraduate Programme Manager**, providing documentary evidence of the reasons of their circumstances.
- (iv) All such applications must be made **before** the deadline and be accompanied by documentary evidence, e.g. a medical certificate, or counsellor's report clearly stating the degree of impairment, and the dates the illness or event prevented you from undertaking your academic studies. This can be applied retrospectively.
- (v) In the event of unusual or unforeseeable circumstances (e.g. serious illness, family bereavement or other exceptional events), that precludes an application in advance, students should make contact with the **Undergraduate Programme Manager** as soon as possible, and make application for waiver of a penalty as soon as practicable.
- (vi) Word limits should be adhered to, especially so when they provide a guide to limiting the student's coverage of a topic and the intended assignment work load. You are strongly advised to adhere to the word limit so as to keep your workload at a manageable level. Any material that is above the word limit may not be taken into account by the marker. Your marker will simply stop at the maximum words for the assignment and you will receive the appropriate grade.

#### Remarking

Application for remarks must be made within 14 days after the assignments or marks are made available.

Every attempt is made to ensure that the marking is consistent across tutors and fair to students.

Students may ask for their written work to be remarked. A different tutor will do the remarking and provide comments.

<u>For marks</u>: If the mark differs by 10% or less the two marks are averaged. If it exceeds 10% then it is independently marked by a third marker and the average of the two closest marks is taken.

<u>For grades</u>: If the grade differs by one grade then the highest grade is taken. If the grade differs by more than one grade then the assignment is marked by a third marker and the average grade is taken. Experience from previous years is that almost all remarks are within 10% or one grade. Occasionally there is a significant shift in the mark or grade.

To apply for a remark, complete the request for re-examination of assessed work form (Annex B) stating which sections (criteria listed in the mark sheet) you wish re-examined. You must provide academic reasons on why you think the mark does not, in your view, fairly reflect the quality of your work. Your assignment will only be reconsidered on the points you raised. Complete remarks will not be undertaken. Hand this with your assignment into the following place:

• Pipitea Campus – the Reception Desk on Level 10 Rutherford House where your assignment will have the <u>time</u>, <u>date and signature</u> noted on the front cover by the person receiving it.

Allow a minimum of 5 days for remarks to be completed.

#### **Group Work**

To facilitate learning through the case method, group work is recommended. Preparation of a case might proceed as follows: (1) read the case and consult appropriate readings, (2) meet with your group to discuss major aspects of the case, (3) after the group meeting, formulate answers and bring it to class in order to participate in the discussion, and (4) after the class, reflect on what you have learned from the specific case situation (this is the most significant step). Thus, learning through the case method occurs at three levels: on your own, from the members of your group, and from the members of your class. While the course has a tradition of study group collaboration, there are important elements in the assessment process that are strictly individual. Collaboration on individual assignments is <u>not</u> allowed beyond general discussion as to how one might interpret the nature of the assignment question. <u>Please do not work together to formulate a response and do not loan out your completed assignments.</u> For assignment two, you will be expected and encouraged to work in groups as discussed in class and/or tutorials.

## **Use of Turnitin**

Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine <a href="http://www.turnitin.com">http://www.turnitin.com</a>. Turnitin is an on-line plagiarism prevention tool which compares submitted work with a very large database of existing material. At the discretion of the Head of School, handwritten work may be copy-typed by the School and submitted to Turnitin. A copy of submitted materials will be retained on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

#### Student feedback

Student feedback on University courses may be found at www.cad.vuw.ac.nz/feedback/feedback\_display.php.

## **Class Representative**

A class representative will be elected in the first class, and that person's name and contact details made available to VUWSA, the course coordinator and the class. The class representative provides a communication channel to liaise with the course coordinator on behalf of students.

## **Communication of Additional Information**

Additional information and information on any changes will be conveyed to students via class announcements and in written form on the university blackboard server for MGT314.

## Link to general information

For general information about course-related matters, go to http://www.victoria.ac.nz/vbs/studenthelp/general-course-information

#### **Note to Students**

Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and academic audit. The findings may be used to inform changes aimed at improving the quality of VBS programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

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# **Tentative Lecture Sessions**

Course schedule is tentative and subject to revision depending on class progress. Assignments are due according to the instructions given for this course by this professor.

Sessions	Tentative contents	
1 & 2	<ul> <li>Module 1: Conceptual Understanding of Operations Management</li> <li>Introduction to Operations Management and Operations Strategy, definitions, concepts, strategy, planning and decision</li> <li>Process Vs Operations Vs Project Management</li> <li>Decisions at Operational, Tactical and Strategic Levels</li> <li>Interrelationships between Operations and other business functions in firms</li> </ul>	Case study on Southwest Airlines  Thought provoking discussions and small exercises
3 & 4	<ul> <li>Module 2: Towards an Understanding of Supply Chain Management</li> <li>Basics of Supply Chain Management, definitions, concepts, supply chain operations</li> <li>Inventory Management vs Supply Chain Management</li> <li>Global Supply Chain Management</li> <li>What makes Supply Chains Difficult: Supply chains under complexity, uncertainties</li> <li>Supply Chain Risk Management: Disaster, Disruption and Deviations</li> </ul>	Li and Fung Case Study  Nokia Ericson case study
5 & 6	<ul> <li>Module 3: Supplier related Operations</li> <li>Outsourcing: Make vs Buy decision and dynamics</li> <li>Key Mistakes in Make vs Buy decisions</li> <li>Supplier Selection process, Current Research in supplier selection and order splitting strategies</li> <li>Quantitative and qualitative models for supplier selection</li> <li>Supplier Relationship Management</li> </ul>	Cisco Case Study  IBM example  Toyota Case Study
7 & 8	<ul> <li>Module 4: Forecasting, Planning &amp; Managing Inventories</li> <li>Forecasting Techniques,</li> <li>Capacity and Aggregate Planning</li> <li>Types of Inventory, Inventory related costs, Safety Stocks, Seasonal stocks,</li> <li>Analysing Impact Of Supply Chain Redesign on the Inventory,</li> <li>Managing Inventory For Short-Life Cycle Products,</li> <li>Multiple Item, Multiple Location Inventory Management, MRP</li> </ul>	Numerical exercises  Forecasting case study  Decision making using Inventory

9 & 10	<ul> <li>Module 5: Lean Production System, Agile and Le-Agile Supply Chain Operations</li> <li>Information related Operations in Supply Chains         <ul> <li>Internal and External Integration, Challenges in supply chain integration,</li> <li>Bullwhip Effect: Demand Volatility &amp; Information Distortions Across Supply Chains,</li> <li>Supply Chain Cooperation, Coordination, Collaboration and Co-opetition,</li> <li>Building Trust in Supply Chains,</li> <li>Vendor Manage Inventory (VMI)</li> <li>CPFR</li> </ul> </li> </ul>	Case study on VMI  Case Study on Supply chain Collaboration  Proctor and Gamble case
11 & 12	Group Presentations and course overview	

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



# **School of Management**

## **MGMT 314**

# Request for re-examination of assessed work

Assessment affected

e.g. Individual Assignment, In-class Test				
Student ID	Name As it appears in your enrolment	Tutorial No/Tutor's name		
<b>Contact Details</b>				
	Email			
- **	tion (criteria specified in the mark re-examine "all" criteria will not be	sheet) you wish to be re-examined e considered.		
	you believe each of these sections worth more," is insufficient.	s should be re-examined:		
1 0	examination of my submitted work, ase in the mark obtained.	I understand that the result may be an		
Signature	Σ	Date		