**MIRIAM COLLEGE**

College of Arts and Sciences

Department of Environment

Second Semester, School Year 2019-2020

**COURSE OUTLINE and LEARNING PLAN**

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| **Course Name** | **Environmental Management** |
| **Course Code** | **ES 238 / 354** | **Course Credits** | **3 Units** | **Contact Hours / Week** | **T | Hours 6:00 PM – 9 PM** |
| Course Description | Managers have to confront various demands from the government, the industry, and public to improve their environmental performance. Addressing these demands could lead to actions by managers that can conflict with the traditional imperative of value creation for shareholders of a company. The most important question, then, for a manager is how to balance social and political demands to protect the environment and the pressure to deliver excellent returns to shareholders. This course examines varying management responses to demands for environmental improvement ranging from regulatory compliance to environmental management strategies beyond compliance. These are investigated from the vantage points of the firm, the industry, and the society.This course focuses on the challenges faced by companies in changing their practices and strategies for competition as they respond to the pressures placed on them by environmental issues. After taking the course, students will have the tools and skills to be able to promote a favorable policy environment that will encourage participation of companies in improving environmental performance. To accomplish this, the course is organized into five parts: (1) introduction; (2) drivers of corporate environmental management; (3) integrating environment and business; (4) strategic environmental management; and (5) future of environmental management. |
| Prerequisite(s) | none |
| Faculty | **Phares P. Parayno, Ph.D.** |
| Course Objectives | At the end of this course, students should be able to:1. Analyze the issues presented in the company cases and recommend appropriate solutions to address these issues;
2. Formulate an environment management action plan to reduce wastes of an organization;
3. Assist small and medium enterprises formulate environmental management system relevant to their operations;
4. Conduct a strategic environmental management analysis of addressing wastes and pollution of a company; and
5. Formulate an environment strategy appropriate to the nature of an organization.
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 **COURSE CONTENT**

| **Week** | **Desired Learning Outcomes** | **Course Content/ Subject Matter** | **Methodology / Teaching and Learning Activities (TLAs)** | **Student Output** | **Assessment of Learning/ Assessment Tool** | **Remarks** |
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| 1Jan 25 | * Explain the various drivers of adopting environmental management in business.
* Discuss arguments for integrating environment in business strategy.
 | Course Overview, Business Challenge of Going Green | Students participate in class discussion.Lecture discussion on the scope of the course. | Student participation in class discussion |  |  |
| 2Feb 1 | * Analyze the influence of regulation and other institutions on environmental management in businesses.
 | Environmental regulation, institutional demand and market response. | Lecture discussion on the interaction between government regulation and environmental management. | Student participation in class discussion. | Rubric for class participation |  |
| 3Feb 8 | * Analyze the effects of international environment directive on environmental management
 | International environment agreement and environment management  | Assign selected environmental directive from EU to students.Students explain the main points of the directive and explain how these directives affect environmental management in other countries, such as the Philippines.EU Directives: WEEE, RoHS, REACH | Students report analysis of the effect of these international regulation and agreement on environmental management in the Philippines. |  |  |
| 4Feb 15 | * Explain the principles of incorporating sustainability in designing new products
 | Product Design, design for environment, integrating life-cycle environmental concerns into product design | Video presentation of1. William McDonough “Cradle to Cradle
2. Janine Benyus “Biomimicry”

Exercises on identifying various products that incorporate sustainability in their design. | Students formulate questions and articulate insights from viewing a video. |  |  |
|  5Feb 22 | * Analyze the issues affecting the introduction of a product designed to reduce waste.
 | Design for Sustainability | Cases to read a week ahead: Deja Shoe and MethodAnalyze the issues in the case with respect to design for the environment. | Students analyze a relevant operations problem as described in a case. | Rubric for case analysis |  |
| 6Feb 29 | * Identify materials that contribute to the sustainability of the manufacturing of goods and products.
* Distinguish materials and inputs that minimize impacts on the environment and society.
 | Inputs and Procurement | Students read the case “Sustainability at IKEA Group”Analyze the issues in the case with respect to sourcing materials from suppliers | Students report their research on green purchasing practices of companies. | Rubric for oral reporting |  |
| 7Mar 7 | * Analyze green marketing strategies of companies
 | Green marketing and managerial strategies | Case to read: Fiji WaterStudents analyze the major problem of the case and the decision-making that needs to be done to address the problem in the case. | Students analyze green marketing strategies of Fiji Water. Students participate in case discussion. | Rubric for case discussion |  |
| 8Mar 14 | * Design a program on waste reduction in an organization
* Determine various waste minimization and pollution prevention programs appropriate to the different businesses.
 | Lean and Green Manufacturing and Sustainable Manufacturing | Lecture discussion on sustainable manufacturing Case to read: Herman Miller | Students participate in class discussion. Students analyze relevant operations problems as described in a case. Students decide on the appropriate solution to the problems presented in the case. | Rubric for class participation. |  |
| 9Mar 21 | * Determine environmental aspects of an organization.
* Design an environmental management program to address a company’s environmental aspects.
 | Integrated environmental management systems and ISO 14001 | Lecture discussion on EMS and ISO 14001 | Students participate in class discussion and exercise. | Rubric for class participation. |  |
| 10Mar 28 | * Apply principles of environmental management system in designing environment management program of a business.
 | Integrated environmental management systems and ISO 14001. | Distribute the case Honda a week ahead. Students analyze the decisions to make to address the problem in the case. | Students analyze the decision of Honda to establish ISO 14001 into their production system. | Rubric for case analysis. |  |
| 11Apr 4 | * Integrate environmental management principles in supply chain management
 | Environmental management accounting | Students analyze the decision to make to address the issues in the case.Case: Walmart China, Sustainable Operations Strategy | Student presentation of cases of green purchasing. | Rubric for oral reporting |  |
| 12Apr 11 | **Holy Week Break** |  |  |  |  |  |
| 13Apr 18 | * Distinguish the difference between logistics and reverse logistics
 | Transportation and Distribution, Reverse Logistics | Students analyze the case: BMW.Students evaluate BMW’s take-back strategy for recycled vehicle parts. | Students analyze the recycling strategies of BMW.  | Rubric for oral reporting |  |
| 14Apr 25 | * Evaluate and differentiate recycling and remanufacturing
 | Product End-of-Life, Extended Producer Responsibility | Lecture discussion extended producer responsibility.Case: Managing Product Returns at Hewlett-Packard | Students participate in class discussion. | Rubric for class participation. |  |
| 15May 2 | * Explain the various steps to building life cycle management in an organization.
 | Life cycle management | Lecture discussion on steps in implementing a life cycle management in an organization.Group discussion on current initiatives in one department of a company and how this can be linked to another initiative in a different department to support LCM.  | Students present sustainability performance indicators for different companies. | Rubric for oral presentation. |  |
| 16May 9 | Discuss the processes in conducting Sustainability Assessment.Explain the various methodologies in conducting Sustainability Assessment. | Sustainability Assessment | Lecture discussion on steps in conducting sustainability assessment of companies. | Students participate in class discussion. | Rubric for class participation. |  |
| Week 17May 16 | Synthesize the concepts and principles of environmental management | Course Integration | Individual presentation | Student presentation | Rubric for oral presentation |  |

*Note*: The cases for discussion indicated on the outline may be changed.

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| References: | **References**Russo. (2008). *Environmental Management: Readings and Cases. 2nd edition*. Thousand Oaks, CA: Sage Publications, Inc. (available in the library)Schaltegger, S., Burritt, R., and Petersen, H. (2003). *An Introduction to Corporate Environmental Management: Striving for Sustainability*. Sheffield, UK: Greenleaf Publishing Limited.**Week 1: Overview of environmental management**Elkington, John. (2008). *The Triple Bottom Line: Sustainability’s Accountants*. in Russo (2008). Environmental Management: Readings and Cases (2nd ed). (pp 49-66). Thousand Oaks, CA: Sage Publications, Inc.Elkington, John. *What is the Triple Bottom Line,* Retrieved from [www.youtube.com/watch?v=l5MPOuhmpmk](http://www.youtube.com/watch?v=l5MPOuhmpmk)Hart, Stuart. (1999.) “Beyond Greening: Strategies for a Sustainable World.” Chapter 1 of Russo, (ed.) *Environmental Management: Readings and Cases*. Boston, MA: Houghton Mifflin Company.Lovins, L. H. (2008.) The Business Case for Climate Protection. In Russo, (ed.) *Environmental management: Readings and Cases*. Thousand Oaks, CA: Sage Publications, Inc.**Week 2: Government Regulation**Buysse and Verbeke. (2003.) “Proactive Environmental Strategies: A Stakeholder Management Perspective.” *Strategic Management Journal*.24: 453-470. Madsen and Ulhøi. (2001.) “Integrating Environmental and Stakeholder Management.” *Business Strategy and the Environment*. 10, 77-88. Schmidheiny and Zorraquin. (1996.) “Eco-efficiency and the Financial Markets.” Chapter 1 of *Financing Change: The Financial Community, Eco-efficiency, and Sustainable Development*. Cambridge, MA: The MIT Press.World Bank. (2000.) “Regulating Pollution in the Real Word.” Chapter 2 of *Greening Industry: New Roles for Communities, Markets, and Government*. New York, N. Y.: Oxford University Press. **Week 3: International Environmental Agreement and Foreign Government Regulations**RoHS (Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) Directive of the European Union.REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) Directive of the European Union.WEEE (Wastes from Electrical and Electronic Equipment) Directive of the European Union.**Week 4: Product Design**William McDonough. (2005). Cradle-to-Cradle Design. Retrieved from <http://www.ted.com/talks/william_mcdonough_on_cradle_to_cradle_design?language=en>Janine Benyus. (2009). Biomimicry in Action. Retrieved from <http://www.ted.com/talks/janine_benyus_biomimicry_in_action?language=en>**Week 5: Design for Sustainability**Crul M. R. M.; Diehl, J.C. (2006). *Design for Sustainability: A Practical Approach for Developing Economies*. UNEP DTIE and TU Delft.Fiksel, Joseph. (1996.) “Achieving Eco-efficiency through Design of Environment.” *Total Quality Environmental Management*. Summer. 47-54. Case: Hardy, Paul. (1996). *Deja Shoe (A): Creating the Environmental Footwear Company*. Washington, DC: WRI.Case: Larson, Andrea (2007). Method: Entrepreneurial Innovation, Health, Environmental, and Sustainable Business Design. Charlottesville, VA: University of Virginia Darden School Foundation.**Week 6: Inputs and Procurement**USEPA. (2005.) Integrating Green Purchasing into your Environment Management System. Retrieved from <http://www.epa.gov/epp/pubs/grn-pur/green-pur-ems1a3a.pdf>Rangan, Toffel, Dessain, Lenhardt. (2015). *Sustainability at IKEA Group*. Boston, MA: Harvard Business School Publishing.**Week 7: Green marketing and managerial strategies**Polonsky and Rosenberger. (2001). “Reevaluating Green Marketing, A Strategic Approach.” *Business Horizons* (September-October), pp. 21-30.Case: McMaster and Nowak (2009). *Fiji Water and Corporate Social Responsibility: Green Makeover of “Greenwashing”?* Ontario, Canada: Western University Ivey Business School.**Weeks 8: Lean and Green Manufacturing**OECD. (2011). *Sustainable Manufacturing Toolkit: Seven Steps to Environmental Excellence*. Retrieved from <http://www.oecd.org/innovation/green/toolkit/48704993.pdf>USEPA. (2003). *Lean Manufacturing and the Environment*. Retrieved from <http://www.epa.gov/lean/environment/pdf/leanreport.pdf>Case: Lee and Bony. (2006). *Cradle-to-Cradle Design at Herman Miller: Moving Toward Environmental Sustainability*. Boston, MA: Harvard Business Publishing.**Weeks 9 and 10: Integrated management system and ISO 14001**Rondinelli, Dennis and Vastag, Gyula. 2000. “Panacea, Common Sense, or Just a Label? The Value of ISO 14001,” Environmental Management Systems” *European Management Journal* 18(5):499-510.Case: Maxwell, Briscoe, Schenk and Rothenberg. 1998. *Honda of America*. Washington D.C.: World Resources Institute. **Week 11: Environmental Management Accounting**Ditz, Ranganathan and Banks (eds.) (1995). *Green Ledgers: Cases Studies in Corporate Environmental Accounting*. Washington, DC: WRI. **Week 13: Transportation and Distribution, Reverse Logistics**Rodrigue, Jean-Paul; Slack, B.; Comtois, Claude. (2001). Green Logistics (The Paradox of). In A.M. Brewer, K.J. Button and D.A. Hensher (eds.) (2001). *The Handbook of Logistics and Supply Chain Management*, London: Pergamon/Elsevier.Case: Cummings, Christopher. (1996). *Bayerische Motoren Werke AG (A*). Washington DC: WRI.**Week 15 Product end-of-life**Walls, Margaret. (2006). *Extended Producer Responsibility and Product Design*. RFF Discussion Paper 06-08. Washington, C.D.: Resources for the Future.Fishbein, Ehrenfeld, and Young. *Extended Producer Responsibility: A Materials Policy for the 21st Century*. Retrieved from <http://www.informinc.org/reportpdfs/wp/EPREntire.pdf>Case: Kumar, Van Wassenhove and Guide. (2002). *Managing Product Returns at Hewlett Packard*. Fontainebleau, France: INSEAD.**Week 16: Life Cycle Management**Remmen, A., Jensen, A. A., Fryndedal, J. (2007). *Life Cycle Management: A Business Guide to Sustainability*. UNEP/SETAC Publication.UNEP. (2007). *Life Cycle Management: How business uses it to decrease footprint, create opportunities and make values chains more sustainable*. Retrieved from <http://www.unep.fr/shared/publications/pdf/DTIx1208xPA-LifeCycleApproach-Howbusinessusesit.pdf>**Week 17: Sustainability Assessment**Pope J., Annandale D., Morrison-Saunders A. (2004) “Conceptualizing sustainability assessment.” *Environmental Impact Assessment Review* 24: 595-616. |
| Instructional Materials | Textbook, handouts, articles, films, slides, Power Point Presentations, invited resource speakers, and other reference books  |
| Course Requirements | Item | Details | Weight/Value |
|  | * Analysis of Case
 | Analyze the issues presented in the case and provide recommendations | 20 % |
|  | * Class Participation
 | Participating in the analysis of the case and providing insightful comments for a deeper understanding of the issues presented in the case | 10 % |
|  | * Group assignments
 | Group assignments focus on selected topics from the outline  | 20 % |
|  | * Oral Presentation
 | Oral presentations test the students’ ability to discuss their deeper understanding and to provide insightful analysis of selected topics from the outline | 10 % |
|  | * Synthesis Presentation
 | The presentation is a synthesis of what was learned in the class by formulating a framework. | 15 % |
|  | * Environmental Management Project
 | The project is to formulate an appropriate environmental management program to a local small and medium enterprise.  | 25 % |
|  |  | TOTAL | 100 % |
| Rubric | * To be attached to individual descriptions of the assignments and outputs
 |  |  |
| Grading SystemComponents: 70 % Class Standing+ 30 % Final Exam |

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| --- | --- | --- |
| **Numerical Rating** | **Qualitative Rating** | **Grade** |
| 99-100 | Outstanding | 5.0 |
| 96-98 | Excellent | 4.5 |
| 93-95 | Very Good | 4 |
| 90-92 | Above Average | 3.5 |
| 87-89 | Average | 3 |
| 84-86 | Below Average | 2.5 |
| 81-83 | Fair | 2 |
| 78-80 | Fair | 1.5 |
| 75-77 | Poor | 1 |
| Below 75 | Failed  | F |

 | F- FailedNE – Never EnteredW – Withdrawn from the courseFA – Failure due to AbsencesINC – Incomplete |
| Classroom Policies | 1. All policies of Miriam College on absences, tardiness and overcuts will be observed.
2. Students are expected to read the assigned materials prior to the schedule of discussion/class activity, and should participate actively in class discussions, group activities, out of the classroom activities, and other learning opportunities stated in the course outline.
3. Students should submit the course requirements on time. Specific policies for each requirement will be discussed during class sessions.
4. Late submission of assignments will be penalized with deductions from total score.
5. All policies of Miriam College pertaining to academic integrity will be strictly observed.
6. Details of other class policies will be discussed during class meetings.
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| Consultation Hours  | TTH 3-5 pm |

**Rubric of class participation**

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| --- | --- | --- | --- | --- |
| **CRITERIA** | **EXCELLENT****96-100** | **GOOD****81-95** | **AVERAGE****70-80** | **NEEDS IMPROVEMENT****60-70** |
| **Relevance (40%)** | * Comments enhance discussion
* Shares insights and elaborates on key points
 | * Contributions are related to topic with general insights
 | * Comments may focus on self or personal experiences but lacks connection to the main points
 | * Comments are tangential or not related to the key points/topic at all
 |
| **Ability to analyze and synthesize concepts/important points (25%)** | * Offers interpretations and analysis of presented material
 | * Identifies the highlights of discussion/presented material and relate them to overarching themes
 | * Identifies the highlights of discussion/presented material
 | * Can’t identify the highlights or important points
 |
| **Frequency (25%)** | * Always active but careful not to dominate the discussion
 | * Contributes regularly to discussions
 | * Comments occasionally to discussions
 | * Does not comment or is too shy or unprepared
 |
| **Attendance in class (10%)** | * Always present in class and always active in discussions
 | * Absent at most twice but frequently involves oneself in discussions
 | * Present, responds when called on
 | * Absent
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**Rubric of case analysis and discussion**

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| --- | --- | --- | --- | --- |
|  | **60-70** | **71-80** | **81-95** | **96-100** |
|  | **Below Standard** | **Approaching Standard** | **At Standard** | **Exceeds Standard** |
| **Clear explanation of key strategic issues (20%)*** The problem, scope, and seriousness was clearly identified in the discussions.
* There was a well-focused diagnosis of strategic issues and key problems that demonstrated a good grasp of the company’s present situation and strategic issues.
* Effective Executive Summary
* Did not waste space summarizing information already found in the case
 | Shows little understanding of the issues, key problems, and the company’s present situation and strategic issues.Executive summary missing or poorly constructed. | Shows some understanding of the issues, key problems, and the company’s present situation and strategic issues.Executive summary inadequate. | Shows adequate knowledge of the issues, key problems, and the company’s present situation and strategic issues.Executive summary adequate. | Shows superior knowledge of the issues, key problems, and the company’s present situation and strategic issues.Effective Executive Summary |
| **Valid arguments; analysis of financial performance with relevant supportive detail (20%)*** Logically organized, key points, key arguments, and important criteria for evaluating business strategies were easily identified.
* Critical issues and key problems that supported the Case Analysis were identified and clearly analyzed and supported.
 | Critical issues and key problems that supported the Case Analysis were poorly identified, analyzed, and supported. | Critical issues and key problems that supported the Cases Analysis were not clearly identified, analyzed, and supported. | Critical issues and key problems that supported the Cases Analysis were partially identified, analyzed, and supported. | Critical issues and key problems that supported the Case Analysis were clearly identified, analyzed and supported. |
| **Appropriate analysis, evaluation, synthesis for the specific industry identified (20%)*** There was complete data on which to base a thorough analysis
* Key change drivers underlying the issues were identified
* Synthesis, analysis, and evaluation were clearly presented and supported in a literate and effective manner.
 | Analysis of key change drivers and the underlying issues inadequate. | Analysis of key change drivers and the underlying issues were not identified. | Analysis of key change drivers and the underlying issues were partially identified. | Analysis of key change drivers and the underlying issues were clearly identified. |
| **Conclusions and recommendations are congruent with strategic analysis*** Specific recommendations and/or plans of action provided.
* Specific data or facts were referred to when necessary to support the analysis and conclusions.
* Recommendations and conclusions were presented and supported in a literate and effective manner.
 | Effective recommendations and/or plans of action not provided.Specific data or facts necessary to support the analysis and conclusions was not provided. | Effective recommendations and/or plans of action inadequate.Specific data or facts were not referred when necessary to support the analysis and conclusions. | Effective recommendations and/or plans of action were partially provided.Specific data or facts were occasionally referred when necessary to support the analysis and conclusions. | Effective recommendations, solutions, and/or plans of action were provided.Specific data or facts were referred when necessary to support the analysis and conclusions. |
| **Proper organization, professional writing, and logical flow of analysis (20%)*** Logically organized, key points, key arguments, and important criteria for evaluating the business logic easily identified.
* Key points were supported with a well thought out rationale based on applying specific concepts or analytical frameworks to the data provided in the case.
* Proper grammar, spelling, punctuation, professional writing, and syntax.
 | Key points were poorly identified and supported with a well thought out rationale based on applying specific concepts or analytical frameworks to the data provided in the case.Grammar, spelling, punctuation, professional writing, and syntax needs significant improvement. | Key points were not identified and supported with a well thought out rationale based on applying specific concepts or analytical frameworks to the data provided in the case.Grammar, spelling, punctuation, professional writing, and syntax needs improvement. | Key points were partially identified and supported with a well thought out rationale based on applying specific concepts or analytical frameworks to the data provided in the case.Adequate grammar, spelling, punctuation, professional writing, and syntax | Key points were clearly identified and supported with a well thought out rationale based on applying specific concepts or analytical frameworks to the data provided in the case.Excellent grammar, spelling, punctuation, professional writing, and syntax. |

**Rubric of group work/presentation**

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| **CRITERIA** | **EXCELLENT****96-100** | **GOOD****81-95** | **AVERAGE****70-80** | **NEEDS IMPROVEMENT****60-70** |
| **Content (50%)** | * Excellent presentation of information
* Demonstrates broad knowledge on the topic
* Employs critical thinking
 | * Adequate understanding of the topic
* Good discussion structure
* Employs critical thinking
 | * Knowledge of the topic is limited
* Lacks critical thinking
 | * Did not understand the topic
* Lacks critical thinking
 |
| **Organization (20%)** | * Presentation is well-organized
* Coherent
* Clear sense of order
* Concisely address research discussion
 | * Presentation is organized
* Discusses content occasionally referring to notes
 | * Always rely on notes
* Presentation is poorly organized
 | * Presentation is very disorganized, incoherent
* Reads from slides or notes
 |
| **Visual Aids (10%)** | * Able to utilize information, data, graphics, and illustrations
* Demonstrates creativity
 | * Applies graphics and bullets
* Slide presentation
 | * Utilizes visuals but difficult to interpret
* Less attractive
 | * Disorganized
* Data, graphics and illustrations deviate from the topic
 |
| **Presentation (20%)** | * Engages the class with professionalism
* Well-organized
* Excellent use of graphics, bullets, illustrations
* Desirable speaking voice
* Able to respond to queries
 | * Effective use of graphics, bullets
* Organized
 | * Minimally organized
* Graphics, bullets difficult to interpret
* No rapport with audience
 | * Disorganized
* Graphics and data poorly presented
* Voice inaudible
* Lacks rapport with audience
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Prepared by: Phares P. Parayno, Ph.D.

Date: 21 January 2020

Approved by: Donna Paz T. Reyes, Ph.D.

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Noted by: Ma. Margarita Alvina-Acosta, Ph.D.

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_