Academic Year	**2019/2020** (same course previously taught at ASE 2016/17, 2017/18, and 2018/19, and in a similar format at the Division of Economics 2015/16)	**Semester**	**Spring**
Course Coordinator	CLUNE, William Henry		
Course Code	ES2201		
Course Title	Law & Economics, Sustainable Development, and Environmental Protection		
Pre-requisites	None		
No of AUs	4		
Contact Hours	39 total hours: 2 hours per week lecture (26 hours total), 1 hour per week lab (13 hours total).		
Proposal Date	29 December, 2019		

Course Aims

The discipline of Law & Economics, and its application of economic analysis to law, provides a useful framework for understanding and evaluating sustainability and environmental policies. In its simplest and most direct form, Law & Economics is about using law and policy to create incentives so that markets and market actors function and behave optimally, including for the production of socially optimal levels of environmental protection and sustainability. This course is designed to give students from all disciplines an introduction to Law & Economics in the context of environmental protection and sustainable development. The course builds a foundation for understanding Law & Economics by (i) introducing some relevant legal systems and environmental regulatory frameworks (US, EU, and ASEAN), (ii) discussing key market actors and stakeholders and their relationships to each other and within existing legal institutions, (iii) examining key aspects of economic markets and market failures that relate to creating more effective incentives, laws, and policies for sustainability and environmental protection, and (iv) understanding the multidisciplinary and culturally dynamic nature of sustainability of which law and governance is one important pillar. With this foundation, the course explores several specific topics of Law & Economics related to Property Law, Contract Law, Torts, and Criminal Law as they support and intersect with environmental protection, sustainable economic development, and other social goals of making the every day activities and choices of key social stakeholders greener and more sustainable (for example, within our cities, in consumer behavior, with respect to economic production, and in the key roles for corporations and businesses). Throughout all modules and lessons, the course takes a specific interest in applying (directly, comparatively, and through many current examples and case studies) all of these subjects to the ongoing experience of Asia, the ASEAN region, and Singapore. By the end of the course, you will have new analytical perspectives and approaches for how Law & Economics can be applied to understanding and creating solutions to many local, regional, and global environmental impact challenges that now confront us as both major problems and substantial innovation and economic opportunities.

Intended Learning Outcomes (ILO)

By the end of this course, you will be able to:

1. Propose solutions for local, regional, and global environmental impact challenges that now confront us as both major social problems and substantial innovation and economic opportunities, using new analytical perspectives and approaches from Law & Economics

2. Differentiate and Compare some specific and general legal approaches from several sustainability and environmental protection frameworks (US, EU, and ASEAN)
3. Analyze how different aspects of economic production, consumption, and related market failures create challenges for sustainability and environmental protection, and how this, in turn, affects the ways we develop good sustainability solutions through laws, policies, and incentives
4. Distinguish and Compare specific areas of law (Property Law, Contract Law, Tort, and Criminal Law) in order to develop better incentives, laws, and policies to support sustainable economic development and environmental protection
5. Observe and Illustrate, directly, comparatively, and through many current examples and case studies, how all of these topics and subjects apply to the situation and ongoing experience of Asia, the ASEAN region, and Singapore

Course Content

Lecture/Tutorial 1: Introduction to Law & Economics; The Big Picture Case for Sustainability

- Administrative Matters; Introduction to Law & Economics; The Big Picture Case for Sustainability; UN SDGs; Incentives for Sustainability
- Administrative: set schedule for quizzes and tutorial presentations

Lecture/Tutorial 2: Introduction to Law & Economics; Introduction to US Legal System and Environmental Laws

- Introduction to Law & Economics, cont'd; Key Stakeholders; Environmental Justice; US Legal System; US Environmental Law

Lecture/Tutorial 3: Introduction to EU Legal System and Environmental Laws

- Quiz #1 at start of class (on lectures 1 and 2)
- EU Legal System; EU Environmental Laws and Environmental Impact Challenges; Government Support of Economic Markets for Green Products and Sustainability Solutions
- Tutorial Presentations

Lecture/Tutorial 4: Environmental Crimes and Criminal Enforcement

- Environmental Crimes and Criminal Enforcement; Law & Economics Theory of Deterrents; Examples and Challenges
- Tutorial Presentations

Lecture/Tutorial 5: The Economics of Sustainability and Environmental Protection

- Quiz #2 at start of class (on lectures 3 and 4)
- Market Failures; Externalities; Transboundary Pollution and its Management; Public Goods; Tragedy of the Commons; Rationality and Irrationality; Economic Equality for Sustainability
- Tutorial: Class Exercise/Game on Funding Public Goods

Lecture/Tutorial 6: ASEAN Legal Frameworks, Sustainable Development, and Environmental Protection

- Quiz #3 at start of class (on lecture 5)
- ASEAN Legal Frameworks; Hard Law and Soft Law; Sustainability and Environmental Protection; Introduction to Game Theory; Equilibriums; Finite versus Repeated Play

Lecture/Tutorial 7: Introduction to Corporate Governance and CSR

- Quiz #4 at start of class (on lecture 6)
- Incorporation and Corporations Law; Legal Personality; Corporate Governance, Corporate Social Responsibility (CSR), and Sustainability
- Tutorial Presentations

Lecture/Tutorial 8: Sustainability

- Sustainability and Sustainable Economic Development; Prosperity within Global and Ecological Limits; Defining (and Redefining) Growth and Prosperity; Equitable and Inclusive Sustainable Development; Regional and Global Level Law and Incentives
- Tutorial Presentations

Lecture/Tutorial 9: Sustainable Cities and Urbanization

- What is a City?; Urbanization; Sustainability Challenges and Opportunities for Cities; Local Level Law and Incentives; Singapore, Traffic Congestion, and Congestion Taxes (ERP)
- Tutorial Presentations

Lecture/Tutorial 10: A Law & Economics Approach to Property Law

- Quiz #5 at start of class (on lectures 8 and 9)
- Property Rights and Property Law; Ownership, Use, and Remedies; The Coase Theorem; Water Rights and Legal Regimes; Tragedy of the Commons
- Tutorial Presentations

Lecture/Tutorial 11: Valuation, Environmental Services, and Internalizing All Costs of Pollution

- Quiz #6 at start of class (on lecture 10)
- Economic Valuation of Environmental Amenities and Disamenities; CBA; Internalizing Externalities; Environmental Services; Circular Economy; EU Carbon Emissions Trading Scheme
- Tutorial Presentations

Lecture/Tutorial 12: A Law & Economics Approach to Tort Law

- Tort Law and Tort Liability; Litigation, Environmental Protection, and Punitive Damages; Climate Change Litigation
- Tutorial Presentations

Lecture/Tutorial 13: A Law & Economics Approach to Contract Law

- Quiz #7 at start of class (on lectures 11 and 12)
- Administrative: Final Projects/Papers
- Contract Law, Bargaining, and Remedies; Applications to Sustainability; Game Theory Revisited
- Tutorial Presentations

End of Course

Assessment (includes both continuous and summative assessment)

Component	ILO Tested	Related Programme LO or Graduate Attributes (see Appendix 5)	Weighting	Team/ Individual	Assessment Rubrics
1) **in class quizzes** (7 total, starting lecture 3, given start of class, drop 1 lowest score)	*1, 2, 3, 4*	*1, 3, 4, 5*	35%	Individual	Appendix 1
2) **in class tutorial presentation** (power point slides, 2 for each student, on an article or paper the instructor assigns in advance)	*1, 2, 3, 4, 5*	*1, 2, 3, 4, 5, 6*	20%	Individual	Appendix 2
3) **final term project/paper** (due at the end of the course)	*1, 2, 3, 4, 5*	*1, 2, 3, 4, 5, 6*	35%	Individual	Appendix 3
4) **class participation**	*1, 2, 3, 4, 5*	*1, 2, 3, 4, 5, 6*	10%	Individual	Appendix 4
Total			100%		

Description of Assessment Components:

1) **in class quizzes** (7 total, starting lecture 3, given start of class, drop 1 lowest score)

- given at the beginning of class; 15 minutes long; about 4 or 5 questions per quiz (mostly yes/no, multiple choice, and fill in the blank, with some short answer questions); matriculation number only (no names) on quiz

- each quiz will focus on information from lecture, the posted lecture slides, and the required readings; the syllabus gives lectures and materials to be covered for each quiz
- the quizzes take the place of a final exam for in-class assessment on specific lecture topics, and will be treated with the same seriousness as a final exam; MC from ASE office needed for missing a quiz (zero grade with no MC), and a make-up assignment is then required (if you want points for that quiz) with a 5-6 page take-home essay question (1 week for you to complete) as assigned by the instructor
- answer key posted; quizzes returned during class
- I've found (over 5 previous years teaching this course in 2 different NTU departments) that quizzes are superior to a final exam in helping you stay current and engaged in the ongoing lecture materials

2) **in class tutorial presentation** (power point slides, 2 for each student, on an article or paper the instructor assigns in advance)

- individual presentations (2 total for each student) of an article/paper assigned by the instructor; tutorial presentations are done throughout the term, almost every class, at the end of class after lecture
- You are the class expert on an important or cutting edge article/paper; to explain its content and key points to your colleagues; and as related to what we're studying in the course
- presentation to the class with prepared power point slides; 15 minutes per presentation; articles sent 1 week in advance by email; an exercise in working independently (little or no help from instructor); grades and feedback sent to the student afterwards by e-mail

3) **final term project/paper** (due at the end of the course)

- each student submits a final project/paper individually; instead of a final exam, this is the your chance to apply and put the ideas and concepts from the whole course together
- topic: pick a present day environmental or sustainability issue, and analyze it for challenges and/or solutions using concepts from Law & Economics
- be creative and innovative with your topic and approach; a paper is fine, but other formats are also acceptable (you are encouraged to discuss creative project ideas in advance with the instructor); if written, 8-10 pages (not including cover page or references); but you are also free to create a video, e-book, app, interview, or other ideas
- regardless of project format, this is a research project; thorough research and analysis are the main requirements; and regardless of the form of your project/paper all projects must submit a list of references to show sources
- regardless of project format, think along these lines: Research Question, Introduction/Background, Analysis, Conclusions, Further Research (this works most directly for papers, but can be applied and extended for other kinds of projects)
- generally: specific topics work better than broad ones
- updates and information will be given throughout the term; and appointments during office hours are encouraged to discuss topic, format, and progress
- final project/paper due after the course is over; sent directly to the instructor via e-mail (or submitted another way if arrangements are made in advance, and as required by the format of the project)
- points lost for late submissions

4) **class participation**

- substantive and quality participation in all class discussions; supporting colleagues when they're making tutorial presentations (listening and asking good follow up questions)

Formative feedback

Formative feedback will be provided for each assessment element and in a manner appropriate for that assessment element:

1) **in class quizzes** (7 total, starting lecture 3, given start of class, drop 1 lowest score)

- feedback the following week with returned/graded quizzes and scores; answer key posted in NTULearn after each quiz

2) **in class tutorial presentation** (power point slides, 2 for each student, on an article or paper the instructor assigns in advance)

- direct written feedback given by e-mail after you complete a presentation; the articles/papers to be presented on are distributed in this way by e-mail, so the follow up is done in the same, direct manner; both as to general matters and/or suggestions for improvement and/or critiques, and with specific grade/points for each presentation

3) **final term project/paper** (due at the end of the course)

- because the final term project/paper is due after the course ends, feedback will be prospective and proactive, coming in the form of instructor-student interactions throughout the term related to selection of a suitable topic, discussion about project format, and updates on project progress
- many of these discussions and meetings are mandatory, taking place in class as part of ongoing reminders and updates about deadlines and project expectations; some of these meetings are voluntary and are offered to all students to make an appointment during office hours when/if they want input/help/advice
- this approach has worked well for the course in the past, the final projects/papers are of a generally very high quality, and instructor-student interaction about the projects/papers occurs in a variety of informal or formal (updates during class or during scheduled office hours) settings depending on your need or preference

4) **class participation**

- feedback given through ongoing, in-class discussions, including attendance and being present for all in-class activities; to some extent feedback in this case is also the responsibility of the instructor to engage students who participate less, or who are quieter; the class subject is suitable for the legal "socratic method" of calling on you to recapitulate or extend ideas and concepts under discussion; as expected, all ASE students have valuable discussion contributions to make, some speak often and voluntarily, and some have to be encouraged a bit to speak up

The goal of this feedback is reasonable transparency (such that you know where you stand) and useful feedback (suggestions and input that's timely for use on future course assignments).

Learning and Teaching approach

Approach	**How does this approach support you in achieving the learning outcomes?**
Lecture	Lectures will focus on giving the main facts, context, background, theories, models, and analytical frameworks to understand and use Law & Economics; the extensive background and lecture material is necessary since this is an introductory course with no prerequisites, and the subjects of law, economics, and Law & Economics are generally new to most of you; a focus on examples and current case studies (many from Asia and Singapore) helps you apply and interpret the information
Tutorials	• games and in-class exercises (for example, funding public goods game) help you see in a hands-on and fun way how theories work, particularly as related to key points about the interaction of market actors as it affects environmental impact challenges • presentations; the articles and papers assigned are classic and/or cutting edge Law & Economics materials; updating with most

	current information is one point; but the bigger goal pedagogically is getting students directly engaged in analyzing and critical thinking of course concepts; this is simultaneously good for their comprehension and retention of material; another benefit here is that it's very helpful to the other students to hear class concepts interpreted by someone from your own cohort/age/gender (especially for a subject like sustainability, which has a highly dynamic social and cultural aspect); the articles and papers assigned are often reinforcing of class concepts, but just as often provocative and challenging to standard theories and/or class lectures, and are therefore designed to stimulate discussion and new questions; also, a number of legal cases are assigned to augment the context, history, and background of these topics

Reading and References

Nil

Course Policies and Student Responsibilities

(1) Related to In-Class Quizzes; the quizzes take the place of a final exam for in-class assessment on specific lecture and course topics, and will be treated with the same seriousness and academic integrity expectations as for a final exam; an MC from the ASE office is needed for missing a quiz (zero grade with no MC), and a make-up assignment is then still required (if you wants points for that quiz) in the form of a 5-6 page take-home essay question (1 week for you to complete) as assigned by the instructor

(2) General

You are expected to complete all assigned pre-class readings and activities, attend all seminar classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. You are expected to participate in all class and tutorial discussions and activities.

(3) Absenteeism

Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. If you miss a lecture, you must inform the course instructor via email prior to the start of the class.

Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Course Instructors

Instructor	Office Location	Phone	Email
CLUNE, William Henry	N2-01c-74	6592-1649	whclune@ntu.edu.sg

Planned Weekly Schedule

Week	Topic	ILO	Readings/ Activities
Week 1	**Lecture/Tutorial 1**: Introduction to Law & Economics; The Big Picture Case for Sustainability	*3, 5*	- Introduction to Law & Economics; The Big Picture Case for Sustainability; UN SDGs; Incentives for Sustainability - Administrative: set schedule for quizzes and tutorial presentations
Week 2	Lecture/Tutorial 2: Introduction to Law & Economics; Introduction to US Legal System and Environmental Laws	2,5	- Introduction to Law & Economics, cont'd; Key Stakeholders; Environmental Justice; US Legal System; US Environmental Law
Week 3	Lecture/Tutorial 3: Introduction to EU Legal System and Environmental Laws	2,5	- Quiz #1 at start of class (on lectures 1 and 2) - EU Legal System; EU Environmental Laws and Environmental Impact Challenges; Government Support of Economic Markets for Green Products and Sustainability Solutions - Tutorial Presentations - *A Comparative Law Analysis of the Use of State-Level Green Procurement in The European Union and The United States*; William Henry Clune (Nordic Environmental Law Journal, December 2011)

Week 4	Lecture/Tutorial 4: Environmental Crimes and Criminal Enforcement	2,5	- Environmental Crimes and Criminal Enforcement; Law & Economics Theory of Deterrents; Examples and Challenges - Tutorial: Class Exercise/Game on Funding Public Goods
Week 5	Lecture/Tutorial 5: The Economics of Sustainability and Environmental Protection	1,3,4,5	- Quiz #2 at start of class (on lectures 3 and 4) - Market Failures; Externalities; Transboundary Pollution and its Management; Public Goods; Tragedy of the Commons; Rationality and Irrationality; Economic Equality for Sustainability - Tutorial Presentations
Week 6	Lecture/Tutorial 6: ASEAN Legal Frameworks, Sustainable Development, and Environmental Protection	1,2,3,5	- Quiz #3 at start of class (on lecture 5) - ASEAN Legal Frameworks; Hard Law and Soft Law; Sustainability and Environmental Protection; Introduction to Game Theory; Equilibriums; Finite versus Repeated Play
Week 7	Lecture/Tutorial 7: Introduction to Corporate Governance and CSR	2,3	- Quiz #4 at start of class (on lecture 6) - Incorporation and Corporations Law; Legal Personality; Corporate Governance, Corporate Social Responsibility (CSR), and Sustainability - Tutorial Presentations
Week 8	Lecture/Tutorial 8: Sustainability	1, 2, 3, 4, 5	- Sustainability and Sustainable Economic Development; Prosperity within Global and Ecological Limits; Defining (and Redefining) Growth and Prosperity; Equitable and Inclusive Sustainable Development; Regional and Global Level Law and Incentives - Tutorial Presentations - *Planetary Boundaries: Exploring the Safe Operating Space for Humanity*; Johan Rockström (Stockholm Resilience Centre) et al (Ecology and Society, Vol 14, No 2, Art 32, 2009)

Week 9	Lecture/Tutorial 9: Sustainable Cities and Urbanization	1, 2, 3, 4, 5	- What is a City?; Urbanization; Sustainability Challenges and Opportunities for Cities; Local Level Law and Incentives; Singapore, Traffic Congestion, and Congestion Taxes (ERP) - Tutorial Presentations - *The Three Pillars of Sustainability Framework: Approaches for Laws and Governance*; William Henry Clune & Alexander J. B. Zehnder (Journal of Environmental Protection 9, March 2018)
Week 10	Lecture/Tutorial 10: A Law & Economics Approach to Property Law	1,4,5	- Quiz #5 at start of class (on lectures 8 and 9) - Property Rights and Property Law; Ownership, Use, and Remedies; The Coase Theorem; Water Rights and Legal Regimes; Tragedy of the Commons - Tutorial Presentations - *The Problem of Social Cost*; Ronald Coase (3 Jrnl of Law and Econ, pp 1-44, 1960)
Week 11	Lecture/Tutorial 11: Valuation, Environmental Services, and Internalizing All Costs of Pollution	1,3,5	- Quiz #6 at start of class (on lecture 10) - Economic Valuation of Environmental Amenities and Disamenities; CBA; Internalizing Externalities; Environmental Services; Circular Economy; EU Carbon Emissions Trading Scheme - Tutorial Presentations
Week 12	Lecture/Tutorial 12: A Law & Economics Approach to Tort Law	1,4,5	- Tort Law and Tort Liability; Litigation, Environmental Protection, and Punitive Damages; Climate Change Litigation - Tutorial Presentations
Week 13	Lecture/Tutorial 13: A Law & Economics Approach to Contract Law	1,4,5	- Quiz #7 at start of class (on lectures 11 and 12) - Administrative: Final Projects/Papers - Contract Law, Bargaining, and Remedies; Applications to Sustainability; Game Theory Revisited - Tutorial Presentations

Week 14	--	--	--
Week 15	Final Term Papers/Projects Submitted	1,2,3, 4, 5	- the due date is generally the second Friday after regular lectures end (exact date changed as year and scheduling require)

Appendix 1: Assessment Criteria for <u>in class quizzes (35% of grade)</u>

- generally, 4-5 questions per quiz; 10 points total possible per quiz; 7 quizzes given in total throughout the term (drop 1 lowest quiz score)
- most of the questions are simple yes/no, multiple choice, or fill in the blank based on facts, definitions, and material presented in lecture slides, so those are simply correct or incorrect; marks per question are shown on the quiz sheet
- <u>required elements</u>: for short answer quiz questions, there's not a lot of time or space during these quizzes, so this is an exercise in making brief, tight, logical statements that answer the question by drawing directly on material and concepts presented in class and the assigned readings; points given for clarity of thought, using correct information and concepts, and good critical thinking or analysis based on logical reasoning and evidentiary support; points off for incorrect or irrelevant information, or for making unsupported or illogical conclusions/statements

Grade / Numerical Score	Criteria
A+ (Exceptional) A (Excellent)	- All or nearly all of the multiple choice, fill in the blank, and yes/no questions answered correctly; showing mastery of the lecture and course material. - All required elements present for short answer questions; excellent logic, clarity, and concision
A- (Very good)	- Nearly all of the multiple choice, fill in the blank, and yes/no questions answered correctly; showing strong understanding and retention of the lecture and course material. - Most required elements present for short answer questions; very good logic, clarity, and concision
B+ (Good) B (Average)	- Most of the multiple choice, fill in the blank, and yes/no questions answered correctly; showing a good understanding and retention of the lecture and course material. - Some required elements present for short answer questions; good logic, clarity, and concision
B- (Satisfactory) C+ (Marginally satisfactory) C (Bordering unsatisfactory)	- Some of the multiple choice, fill in the blank, and yes/no questions answered correctly; showing a partial understanding and retention of the lecture and course material. - Only some of the required elements present for short answer questions; average or inconsistent logic, clarity, and concision.
C- (Unsatisfactory) D (Deeply unsatisfactory)	- Few of the multiple choice, fill in the blank, and yes/no questions answered correctly; showing a poor understanding and retention of the lecture and course material. - Few of the required elements present for short answer questions; below average to poor logic, clarity, and concision.
F (0-44)	- Failure to take quiz

Appendix 2: Assessment Criteria for <u>in class tutorial presentation (20% of grade)</u>

- 2 presentations to the class per student; 10 points possible per presentation; 15 minutes each; power points presentations
- <u>required elements</u>: the student is the class expert on an important or cutting edge article/paper; the main point is to explain its content and key points to their colleagues; and as related to what we're studying in the course; points are awarded for quality of content, analysis, and comprehension; evidence of independent and critical thinking as to separating important from less important subjects; clarity, good communication (oral and written), and brevity of the presentation; points are lost for lack of organization, focus on irrelevant or secondary issues/topic, lack of clarity, and poor presentation

Grade / Numerical Score	Criteria
A+ (Exceptional) A (Excellent)	- Exceptionally prepared for the presentation, thorough rehearsal and time checks. - Content covers all the required elements extensively, excellent structure, and introduces additional knowledge through secondary readings at appropriate times. - Delivery is clear, articulate and concise. - Any questions are answered knowledgably. - Presentation is precisely timed to allow introduction and conclusions, as well as adequate time for questions/discussion.
A- (Very good)	- Well prepared for the presentation, adequate rehearsal and time checks. - Content covers all the required elements, is well structured, and introduces some additional knowledge through secondary readings at appropriate times. - Delivery is clear, articulate and concise. - Any questions are answered correctly. - Presentation is well timed to allow introduction and conclusions, with some time for questions/discussion.
B+ (Good) B (Average)	- Shows some preparation for the presentation, some rehearsal and time checks. - Content covers most of the required elements, and shows adequate structure. - Delivery is adequately clear, articulate and concise. - Any questions are answered correctly. - Presentation is adequately timed but may not allow full questions/discussion time.
B- (Satisfactory) C+ (Marginally satisfactory) C (Bordering unsatisfactory)	- Shows marginal preparation for the presentation, marginal rehearsal and time checks. - Content covers some of the required elements, and shows little structure. - Delivery is marginally clear, articulate and concise. - Any questions are answered mostly correctly. - Presentation is inadequately timed.

C- (Unsatisfactory) D (Deeply unsatisfactory)	- Shows no preparation for the presentation, no rehearsal and time checks. - Content covers none of the required elements, and no obvious structure. - Delivery is not clear, articulate and concise. - Any questions are answered incorrectly. - Presentation is poorly timed.
F (0-44)	- Failure to give presentation

Appendix 3: Assessment Criteria for <u>final term project/paper (35% of grade)</u>

- each student submits a final project/paper individually; 100 points per project possible
- topic: pick a present day environmental or sustainability issue, and analyze it for challenges and/or solutions using concepts from Law & Economics
- <u>required elements</u>: instead of a final exam, this is the student's chance to apply and put the ideas and concepts from the whole course together; more than any other assessment item, the final term project/paper is to show critical thinking and quality of analysis, as well as creativity and innovation in how the student applies course materials and information to a novel topic and environmental or sustainability problem of their own choosing; regardless of project format, this is a research project; thorough research and analysis are the main requirements; and regardless of the form of the project/paper all projects must submit a list of references to show sources, and the quality of sources used will be evaluated; quality of writing, grammar, and presentation is also being evaluated; generally, specific topics work better than broad ones; points lost for late submissions

Grade / Numerical Score	Criteria
A+ (Exceptional) A (Excellent)	- Clarity and distinct originality of thought, with clear link to major topics from lectures, readings, and research materials, as well as important linked topics. - All required elements present with excellent critical thinking and analysis in applying course material to a novel problem and topic of the student's choosing. - Correct use of referencing throughout. - Use of stylish language, with no grammatical or spelling errors. - Shows very clear understanding of key concepts and theories, and interpretation of wider context issues.
A- (Very good)	- Clarity and distinct originality of thought, with fairly clear links to major topics from lectures, readings, and research materials, as well as important linked topics. - Almost all required elements present with very good critical thinking and analysis in applying course material to a novel problem and topic of the student's choosing. - Correct use of referencing throughout. - Use of stylish language, with no grammatical or spelling errors. - Shows clear understanding of key concepts and theories, and interpretation of wider context issues.
B+ (Good) B (Average)	- Some clarity and originality of thought, with reasonable links to major topics from lectures, readings, and research materials. - Many required elements present with good critical thinking and analysis in applying some key parts of the course material to a novel problem and topic of the student's choosing. - Correct use of referencing throughout. - Some use of stylish language, and not many grammatical or spelling errors. - Shows decent understanding of key concepts and theories, and interpretation of wider context issues.
B- (Satisfactory) C+ (Marginally satisfactory) C (Bordering unsatisfactory)	- Inconsistent clarity and not much originality of thought, with some links to major topics from lectures, readings, and research materials. - Some of the required elements present with decent critical thinking and analysis in applying some parts of the course material to a novel problem and topic of the student's choosing. - Mostly correct use of referencing throughout. - Some use of stylish language, and not many grammatical or spelling errors. - Shows average or inconsistent understanding of key concepts and theories, and average interpretation of wider context issues.

C- (Unsatisfactory) D (Deeply unsatisfactory)	- Inconsistent clarity and poor originality of thought, without many links to major topics from lectures, readings, and research materials. - Not many of the required elements present and with poor critical thinking and analysis in applying the course material to a novel problem and topic of the student's choosing. - Mostly incorrect use of referencing throughout. - Rare use of stylish language, and many grammatical or spelling errors. - Shows poor understanding of key concepts and theories, and poor interpretation of wider context issues.
F (0-44)	- Failure to submit final report

Appendix 4: Assessment Criteria for class participation (10% of grade)

- required elements: attendance; substantive and quality participation in class discussions; supporting colleagues when they're making tutorial presentations (listening and asking good follow up questions)

Grade / Numerical Score	Criteria
A+ (Exceptional) A (Excellent)	contributed weekly to class discussions, and/or in supporting student colleague tutorials, with excellent and well-articulated comments, critical evaluations, and thought-provoking questions
A- (Very good)	contributed weekly or almost weekly to class discussions, and/or in supporting student colleague tutorials, with very good and fairly well-articulated comments, critical evaluations, and thought-provoking questions
B+ (Good) B (Average)	contributed often to class discussions, and/or in supporting student colleague tutorials, with good comments, critical evaluations, and somewhat thought-provoking questions
B- (Satisfactory) C+ (Marginally satisfactory) C (Bordering unsatisfactory)	contributed sometimes to class discussions, and/or in supporting student colleague tutorials, with somewhat relevant comments, critical evaluations, and questions
C- (Unsatisfactory) D (Deeply unsatisfactory)	contributed rarely to class discussions, and/or in supporting student colleague tutorials, with mostly irrelevant or off-topic comments, critical evaluations, and questions
F (0-44)	no contribution to class discussions, no support of student colleague tutorial presentations

Appendix 5: ASE Learning Outcomes

ASE learning outcomes

At the completion of your course of study in ASE, you will be able to:

1) Demonstrate intellectual flexibility and critical thinking in order to apply environmental knowledge in the real world

2) Communicate environmental concepts with enthusiasm to varied audiences both orally and in writing

3) Formulate scientific questions, and be able to access and analyse quantitative and qualitative information to address them

4) Exhibit the motivation, curiosity and skills for lifelong learning

5) Demonstrate ethical values and responsibility

6) Collaborate and lead by influence