



Syllabus: The ABC's of CBA's **Green Business Operations Certificate Program**

1. Course Description

Our ecology and economics are closely linked, and more often than not, they are mutually beneficial rather than adversarial. A green operational plan without adequate financing is like potting a healthy plant in sterile sand – it may look good at first, but it won't last long. This course puts the “green” into a successful Green Business Operations implementation. Students learn the how to construct a CBA, how to compare the ROI of various options, and how to craft a compelling business case. Students gain techniques for facilitating decisions with CBA information in the face of uncertainty. Finally, students acquire agile execution practices for maximizing the delivery of actual business value in the face of uncertainty and change.

2. Learning Objectives

- Speak the language of CBA's and ROI's to tie our ecology and economics together
- Exercise a variety of individual and collaborative estimation techniques for quantifying costs and benefits
- Exhibit proficiency in differentiating one-time and ongoing financial factors, converting to common units, and calculating Return On Investment (ROI)
- Apply decision tree analysis to accelerate and improve decision making with uncertainty
- Build a compelling business case incorporating tangible and less tangible factors
- Breaking down initiatives into incremental deliverables, prioritized by highest business value

3. List of Topics

- Session 1 – Connecting the economics of ecology
 - Course overview
 - Awakening – seeing the connection between environment and finance
 - CBA – structure and terms
 - The Dip – the investment change curve
 - Business Case Template – OOPs (Options, Outcomes, Probabilities)
 - Options – using creative and critical thinking to generate green ideas
 - Form teams and introduce case studies
- Session 2 – Estimating Costs and Benefits
 - The art and science of assumptions
 - Individual and collaborative estimation models
 - Assessing tangible and less tangible factors
 - Differentiating investment (one time costs) from results (ongoing costs and benefits)
 - Understanding net present value
 - Teams – case studies
- Session 3 – Analyzing ROI and Decision Trees
 - ROI – conversion and computations
 - Risk – incorporating uncertainty
 - Comparing multiple options



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- Accelerating decision makings with limited and uncertain information
 - Teams - case Studies
 - Session 4 – Accelerating delivery of business value
 - Breaking down changes into bite sized increments of value
 - Applying CBA to prioritize deliverables
 - Using agile practices to leverage uncertainty and maximize actual ROI
 - Teams - case studies
 - Session 5 – Final Session
 - Wrap up content
 - Caveat – watch out for black swans
 - Team presentations
 - Final exam
4. Reading(s)
- Environmental Valuation & Cost-Benefit News
<http://envirovaluation.org/index.php?cat=29>
 - Fooled by Randomness – Nassim Taleb
 - *Planning Poker* – Mike Cohn
5. Learning Evaluation Methods
- a. Class Contribution: Your participation and contribution is imperative to the development of a collaborative learning environment. Your class contribution will require that you prepare for the class meetings, that you listen actively in class and present your ideas and questions with thoughtfulness. Your contributions will be valued and welcomed in the (1) discussions of the case studies, (2) interaction with group experiential exercises, (3) questions and comments to the lecture presentations.
 - b. Group project: Creation and presentation of a coherent business case based on a green operations case study.
 - c. Final Examination