CLASS MEETING TIME and PLACE: 9:40–11:00am MW; place to be determined.

TEXTBOOK:

GRADING: The final exam will be comprehensive, and will be worth 75 points. The other 25 points of your grade will be determined by presentations on portions of books written or edited by Herman Daly.

POLICIES: (1) Incompletes will be given only for reasons of illness or a family emergency. You must supply evidence for the reason. (2) I will approve withdrawals at any time, subject to University regulations. (3) If you have a learning disability or for other reasons require special assistance in this course or during examinations, please notify me during the first week of class. (4) Cheating on exams and other forms of academic dishonesty may lead to expulsion from the class, failure of the class, or more severe penalties.

TENTATIVE SCHEDULE: (* = see readings list, next two pages)

1/12: Biological Mechanics & Optimal Control Theory
1/14, 1/21, 1/26, 1/28, 2/2, 2/4, 2/9: Fisheries (private-property)
2/11, 2/18: Fisheries (open-access)
2/23: Timber
2/25, 3/2, 3/4, 3/9, 3/11: Exhaustible Resources
3/23: Resources & Growth (Sustainability)*
3/25, 3/30, 4/1, 4/6: Entropy and Thermodynamics*
4/8, 4/13, 4/15, 4/20, 4/22: Daly & Ethics*
4/27: Methodology*
Thursday 4/30: Final Exam, 8:00am–10:00am

1. Readings for the “Resources and Growth (Sustainability)” topic:

(a) Required Readings


iii. Hanley, Shogren, and White, Ch. 2, “The Economics of Sustainable Development.”

(b) Unrequired Readings


2. Readings for the “Entropy and Thermodynamics” topic:

(a) Required Readings

i. Herman E. Daly and Kenneth N. Townsend (1993), all of Part I.


(b) Unrequired Readings


3. Readings for the “Daly & Ethics” topic:

(a) Required Readings


(b) Unrequired Readings

Herman E. Daly and John Cobb, Jr., For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future, 2nd edition, HD75.6 .D35 1994.

4. Readings for the “Methodology” topic:

(a) Required Readings:


(b) Unrequired Readings


OTHER BOOKS OF INTEREST:

1. General Texts:
   (f) Geoffrey M. Heal, ed., *The Economics of Exhaustible Resources*, HC 13.2 E27 1993
   (g) Allen V. Kneese and James L. Sweeney, *Handbook of Natural Resource and Energy Economics*, HB 135. H357 volume 6 parts 1–3

2. Renewable Resources:

3. Optimal Control Theory:
4. Ecological Economics

5. Current Debates:
(a) Running out of Resources
Are new energy sources actually net consumers of fossil fuels?

i. David Pimentel and Tad W. Patzek, numerous stories on the Internet concerning biofuels, including


Miscellaneous


iv. World Commission on Environment and Development, Our Common Future, HD75.6 .O97 1987. (Coined “sustainability.”)


Course Description: Economic implications of mathematical ecology; dynamic equilibria of fishing and timber industries; depletion of nonrenewable resources; intergenerational and intragenerational equity; species’ extinction; entropy and thermodynamics; the future of economic growth; limitations of neoclassical methodology applied to dynamic systems.