

Syllabus

Class Meets:

Lecture: Tuesday, Thursday, Ross K1310, 8-10 am

Discussion: Friday, Ross K1320, 9-11 am

Winter term, first half (3 credits)

January 9 – February 16

18 sessions

Professor Andrew Hoffman

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“We shape our buildings; thereafter they shape us.”

Sir Winston Churchill

Course Overview

The built environment is a major source of society’s environmental impact, and is a major opportunity to find solutions. Recent attention to “green construction” emerges in many domains including energy systems, water use, construction processes, architectural design, site planning and brownfield development, just to name a few. At present, environmental issues can be considered in seemingly unlimited areas of the design and construction process. Yet, advances are slow. General perceptions assert that green construction costs too much money; that the technologies are not available for meaningful change, and opportunities are rare. This seminar addresses these concerns.

This is a survey course. Its goal is to explore this question from many perspectives. We will cover motivations for undertaking green construction projects, technical aspects of their design, obstacles to getting them done, and future directions of the field. The course is intended to increase awareness of green construction issues, so that students will know the range of existing knowledge and issues. Every student that takes this course may one day be involved in the design of a new home or office building. In that position rests the opportunity to shape living and working spaces that reduce their burden on the environment, both for the users’ benefit, and the benefit of generations to come.

Class Format

The course will meet eighteen times during the first half of the winter term. As a three credit course, the workload is heavy and concentrated. Tuesday and Thursday sessions will cover material for the course. The Friday session will be a discussion regarding the week’s issues. We will use a variety of teaching methods, including lecture, discussion, video, guest speakers and field trips. We will cover both residential and commercial construction. You will be expected to come prepared to participate – to ask questions. You should not come and merely play the role of spectator.

Assignments

Class Participation (20%). Class participation is a very important part of the learning process (as well as an important part of your grade). It is critical not only for your personal learning, but also for the learning of your fellow classmates. Much of the value of the class comes from prepared, thoughtful, and informed dialogue between you and your classmates. You are expected to read all the materials and you should apply the material in those readings to your class discussion. Excellent

comments possess one or more of the following attributes: (1) they offer an original and relevant perspective on the issue, (2) they move the analysis forward by building on previous contributions or by revealing fresh insights, (3) they transcend the "I feel" syndrome by including evidence that is based on more than personal experience — in other words, your thinking should reflect and integrate examples from other contexts.

Team Projects (3) Students will form groups of multi-disciplinary teams (SNRE, Ross, Urban Planning, Architecture, Engineering and others) to work on three projects:

1. LEED Certification Exercise (10%). On February 9, students teams will score the Dana Building for its LEED certification. Supporting materials and a self-guided tour will form the basis for this exercise as students allot points for the attributes and innovations in the building. The results of the student assessment will be compared to the actual certification point score of the building.

2. Sector Analysis (35%). Students will research green construction and design in a particular construction context and report their results to the class. What are the particular obstacles and opportunities to integrating green construction techniques into the following sectors? Be sure to consider technical, social, political and economic issues:

1. Hotels (economy)
2. Hotels (luxury)
3. Hotels (resorts)
4. Hospitals
5. Retail (big box)
6. Retail (malls)
7. Retail (small scale downtown retail)
8. K-12 Schools
9. Universities
10. Affordable Housing
11. Single Family Residential
12. Multi-Family Residential
13. Transportation Stations (Airport Terminals, Train Stations)
14. Housing for the Poor in Developing Countries

Write this paper as if it were a brief to either your boss or your client who may be considering a new project in this sector. Analysis results will be turned in on **session # 7** in the form of (1) a 5 page, double spaced report and (2) a 5 slide PowerPoint presentation that you will show in a 9 minute presentation to the class in one of the subsequent sessions. The following document may be helpful in getting you started:

- _____ (2006) *Green Buildings and the Bottom Line* (Oak Brook, IL: Building Design + Construction). Go to: <http://www.bdcnetwork.com/article/CA6390371.html>
You will need to register to obtain the document. There is no charge.

3. Green Development Project (35%). Students will study a real building project, either new construction or renovation. In either case, your final project will be a set of recommendations for green improvements to either the existing structure or current design plans. Projects in the renovation category should be local buildings, perhaps University buildings that have not yet undergone restoration. New construction projects might include:

1. The University of Michigan Biological Station in Pellston Michigan,
Contact: Knute Nadleoffer, EEB, University of Michigan
2. The SSIHM Campus Redevelopment Project in Monroe Michigan,
Contact: Danielle Conroyd, MCLRMP Project Director, IHM.

3. The University of Michigan Credit Union Office Building in Ann Arbor Michigan
Contact: Jim Mattson, President; Al Vegter, AIA, Daniels & Zermack
4. The Green Renovation of City Hall in Ann Arbor, Michigan
Contact: Wendy Rampson, Systems Planner, City of Ann Arbor
5. The Williams St. Station/Affordable Housing in Ann Arbor, Michigan
Contact: Wendy Rampson, Systems Planner, City of Ann Arbor
6. The Sports Medicine Center in Canton Michigan
Contact: Doug Graham, Project Leader

Your final report will consider all relevant dimensions of green construction and design: the technical, economic, social and political aspects of your recommendations. A reasonable outline might include: (a) an overview of the project, (b) the existing green elements if any, (c) your recommendation for green elements, (d) the environmental, social and economic costs and benefits of your recommendations, (e) the obstacles to achieving the desired results, and (f) conclusions. Your project will be turned in on **Session # 17** in the form of (1) a 7 page, double spaced report and (2) an 8 slide PowerPoint presentation that you will show in a 15 minute presentation to the class in **Sessions #17 or 18**.

Field Trip. On February 2, there will be a field trip to the IHM Motherhouse in Monroe Michigan. Students should be prepared for a full day trip.

Course Material

There are five sources of materials for this course:

1. There are two **Text Books**:
 - Kibert, C. (2005) *Sustainable Construction: Green Building Design and Delivery* (Hoboken, NJ: John Wiley & Sons). There is a web page that accompanies the text. Please go to: <http://www.wiley.com/go/sustainableconstruction>
 - McDonough, W. and M. Braungart (2002) *Cradle to Cradle: Remaking the Way We Make Things* (New York: Farrar, Straus and Giroux).
2. **Web Based Readings** must read electronically or downloaded. These readings are listed this way, both to save paper and to assist you in finding relevant web pages on the topic. Many of these readings will be unrealistically long. Feel free to skim as needed.
3. **Web Based Book:** *Building Green for the Future: Case Studies of Sustainable Development in Michigan* (Urban Catalyst Associates, 2005). You may download it at [\[www.urbancatalystassociates.com\]](http://www.urbancatalystassociates.com). Go to “publications and presentations” and click on link.
4. **Web Based Magazine:** Read the *Environmental Building News*. It is free to University students. If you are on-campus, go to: <http://www.buildinggreen.com/articles/index.cfm>. If you are off-campus, go to: <http://www.bus.umich.edu/KresgeLibrary/Collections/A-ZListing/> scroll to buildinggreen.com, click on it, and enter your UMich WebLogin. All previous issues are there.
5. **Supplemental Materials** such as a glossary and background materials are posted on cTools in a folder called “additional materials.”

This reading should be supplemented by steady reading of contemporary green construction issues as published in mainstream media such as *The New York Times*, *Wall Street Journal*, and *Business Week* as well as the construction and green building press. Examples of the former might be *Fine Homebuilding*, *Architecture*, *Architectural Record*, *Residential Architect* and *Metropolis*. Examples of the latter might include *Green Builder*, *Environmental Design + Construction*, *Environmental Building News*, *Eco Structure*, *Sustainable Industries Journal* and *Natural Home Magazine*.

Some online journals include:

Architronic - The Electronic Journal of Architecture	http://architronic.saed.kent.edu/
Bob's Solar Project	http://www-personal.umich.edu/~bgoodsel/solar/blog.htm
Canadian Architect	http://www.cdnarchitect.com
Center for Building Science News	http://eande.lbl.gov/CBS/NEWSLETTER/CBSNEWS.html
Encompass - Alberta's Environmental Magazine	http://www.encompass.org
Energy Science News - US Dept. of Energy	http://www.pnl.gov/energyscience/index.html
Energy Source Builder Newsletter	http://www.oikos.com/esb/index.html
Energy User News	http://www.energyusernews.com/
ENEWS - Energy Electronic Library	http://www.unicamp.br/nipe/enews/
Environmental Building and Design	http://www.yourhomeplanet.com/
Environmental Design & Construction Magazine	http://www.edcmag.com
Environmental Energy Technologies Division News	http://eetd.lbl.gov/news/EETDNews.html
Financial Times Energy	http://www.ftenergy.com
Green Building Pages	http://www.greenbuildingpages.com/main.html
Green@work Magazine	http://www.greenatworkmag.com
Home Energy Magazine	http://www.homeenergy.org/
Inter Americas Adobe Builder Magazine	http://www.adobebuilder.com
Natural Home Magazine	http://www.naturalhomemagazine.com
Online journal of ecological design.	http://www.ecotecture.com
SOLAR TODAY magazine	http://www.solartoday.org
The bimonthly newsletter from the Alliance to Save Energy.	http://www.ase.org/e-EFFICIENCY/
The Canadian Architect and Builder Online	http://collections.ic.gc.ca/architect/
The Last Straw	http://www.strawhomes.com/
USGBC Green Building Links	http://www.usgbc.org/DisplayPage.aspx?CMSPageID=76&

For those of you who may find yourself in New York City, you can contact “Open House New York” which celebrates NY’s architecture and design by offering tours to the public. One of their tours is Sustainable New York: <http://www.ohny.org/programs/sustainablenewyork.cfm>

BA605/NRE605/Arch507
Course Schedule

Session #1	<i>Introduction</i>	Tuesday, January 9
TEXT: <ul style="list-style-type: none">■ Kibert, Chapters 1 (skim Chapters 2 and 5)■ McDonough and Braungart, Introduction and Chapter 1.		
WEB-BASED READINGS: <ul style="list-style-type: none">■ Center for Sustainable Systems (2005) <i>Fact Sheet: Commercial Buildings</i>, (Ann Arbor, U of M). Go to: http://css.snre.umich.edu/makeframe.php?content=4_2_Factsheets■ Center for Sustainable Systems (2005) <i>Fact Sheet: Residential Buildings</i>, (Ann Arbor, U of M). Go to: http://css.snre.umich.edu/makeframe.php?content=4_2_Factsheets■ Wilson, A. (2001) "Buildings and the Environment: The Numbers," <i>Environmental Building News</i>, May. (see "Course Materials" #4, earlier in course packet for instructions to download).		
DUE: Calculate your CO ₂ footprint at http://www.climatecrisis.net/takeaction/carboncalculator/ and your ecological footprint at: http://www.myfootprint.org/ Come to class with your relative impact on the environment.		

I. Why Build Green?

Session #2	<i>Making The Case for Green Construction</i>	Thursday, January 11
TEXT: <ul style="list-style-type: none">■ Kibert, Chapter 13 and 4.■ McDonough and Braungart, Chapter 3.		
WEB-BASED READINGS: <ul style="list-style-type: none">■ _____ (2005) <i>Making the Business Case for High Performance Green Buildings</i>, (Washington DC: US Green Building Council). Go to: https://www.usgbc.org/Docs/Member_Resource_Docs/makingthebusinesscase.pdf■ Building Green (2005) <i>Making the Case for Green Building</i>, vol. 14, no. 4: 1, 10-15. Go to https://www.buildinggreen.com/auth/article.cfm?fileName=140401a.xml■ Kats, G. (2003) <i>The Costs and Financial Benefits of Green Buildings</i>, (Sacramento: California Sustainable Building Task Force). Go to: http://www.usgbc.org/Docs/News/News477.pdf.■ Heschong Mahone Group (1999) <i>Daylighting in Schools: An Investigation into the Relationship Between Daylighting and Human Performance</i>, (Fair Oaks, CA: Heschong Mahone Group). Go to: http://www.h-m-g.com/projects/daylighting/projects-PIER.htm■ Heschong Mahone Group (1999) <i>Daylighting and Retail Sales: An Investigation into the Relationship Between Daylighting and Human Performance</i>, (Fair Oaks, CA: Heschong Mahone Group). Go to: http://www.h-m-g.com/projects/daylighting/projects-PIER.htm■ Boyce, P. C. Hunter and O. Howlett (2003) <i>The Benefits of Daylighting Through Windows</i>, (Washington DC: US Department of Energy). Go to: http://www.lrc.rpi.edu/programs/daylighting/rp_research.asp		

Session #3	<i>Discussion Session 1</i>	Friday, January 12
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TEXT:

- McDonough and Braungart, Chapter 4.

WEB BASED READINGS:

- Turner Construction (2005) *Survey of Green Building Plus Green Building in K-12 and Higher Education* (New York: Turner Green Buildings). Go to:
<http://www.turnerconstruction.com/greensurvey05.pdf>
- *Associated Press* (2005) "Businesses Realize Building Green can Benefit Bottom Line," *Columbia Daily Tribune*, January 16. Go to:
<http://www.showmenews.com/2005/Jan/20050116News022.asp>
- _____ (2005) "Architect Unveils World's First 'Sustainable Condo'" *Greenbiz*, April 5. Go to:
http://www.greenbiz.com/news/news_third.cfm?NewsID=26625

GUEST: Selling Green

- *Paul Murray*, Director of Environmental Affairs and Safety, Herman Miller, Inc.

CASE: Herman Miller Marketplace

- US Department of Energy Buildings Database, Herman Miller Marketplace. Go to:
<http://www.eere.energy.gov/buildings/database/overview.cfm?ProjectID=189>

II. How to Build Green?

TEXT:

- Kibert, Chapter 3 and Appendix A
- McDonough and Braungart, Chapter 5.

WEB BASED READINGS:

- USGBC: Go to: <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>
- Schnieder, A. and R. Udall (2005) *LEED is Broken... Let's Fix It* (Aspen Colorado: Community Office for Resource Efficiency and the Aspen Ski Company). Go to:
<http://www.aspensnowmass.com/environment/images/LEEDisBroken.pdf>
- _____ (2004) *Homeowners Guide: Energy Star Homes* (Washington DC: US EPA). Go to:
http://www.energystar.gov/index.cfm?c=new_homes.hm_index
- Green Globes. Go to: <http://www.thegbi.com/greenglobes/>
- Minergie: Go to: <http://www.minergie.com/>
- BREEAM: Go to: <http://www.breeam.org/>
- Green Star: Go to: <http://www.gbcaus.org/>
- CASBEE: Go to: <http://www.ibec.or.jp/CASBEE/english/index.htm>
- SPiRiT: Go to: <http://www.cecer.army.mil/sustDesign/SPiRiT.cfm>
- Go to "Additional material" folder on cTools for a comprehensive list of certification programs.

GUEST: The Certifier's Point of View

- *Paul Goldsmith*, AIA, Chairperson, USGBC Detroit Regional Chapter, Assistant Director of Operations, HarleyEllis

Session #6	Discussion Session 2	Friday, January 19
CASE: Genzyme Center, Cambridge, Massachusetts		
<ul style="list-style-type: none"> ■ Go to: http://leedcasestudies.usgbc.org/overview.cfm?ProjectID=274 and http://www.cement.org/buildings/buildings_green_genzyme.asp 		

Session #7	Energy and Atmosphere	Tuesday, January 23
TEXT:		
<ul style="list-style-type: none"> ■ Kibert, Chapter 7 ■ McDonough and Braungart, Chapter 6. 		
WEB BASED READINGS:		
<ul style="list-style-type: none"> ■ Wilson, A. (1995) “Establishing Priorities with Green Building,” <i>Environmental Building News</i>, September/October ■ _____ (2004) <i>Lamps</i> (Washington DC: US Department of Energy, Energy Efficiency and Renewable Energy Building Technologies Program). Go to: http://www.eere.energy.gov/buildings/info/components/lighting/lamps/ ■ Wilson, A. (1999) “Daylighting: Energy and Productivity Benefits,” <i>Environmental Building News</i>, September. 		
DUE:	Sector Analysis Papers	
PRESENT:	Sector Analysis #1	

Session #8	Materials and Indoor Air Quality	Thursday, January 25
TEXT:		
<ul style="list-style-type: none"> ■ Kibert, Chapters 9 and 10 		
WEB BASED READINGS:		
<ul style="list-style-type: none"> ■ Wilson, A. (2000) “Building Materials: What Makes a Product Green?” <i>Environmental Building News</i>, January ■ Curtiss, K. and R. Chase (2006) <i>Building Green without going in the Red: A Household Guide to Healthy, Affordable Building Materials</i> (Albany, NY: Citizen’s Environmental Coalition). Go to: http://www.cectoxic.org/pdf/BuildingGreen.pdf ■ American Lung Association Health House: http://www.healthhouse.org/index.asp ■ Trusty, W. (2003) Understanding the Green Building Toolkit: Picking the Right Tool for the Job, (Ontario, Canada: Athena Institute). Go to: http://www.athenasmi.ca/publications/publications.html ■ BEES 3.0, free software download for picking environmentally-preferable building products. Go to: http://www.bfrl.nist.gov/oa/software/bees.html 		
CASE: The California Academy of Sciences, San Francisco, California		
<ul style="list-style-type: none"> ■ The New Sustainable California Academy of Sciences, Award Entry, Holcim Awards for Sustainable Construction. Packet materials and go to: http://www.holcimfoundation.org/awards/nam/silver_nam.html 		
GUEST: The Owner’s Point of View		
<ul style="list-style-type: none"> ■ <i>J. Patrick Kociolek</i>, PhD, Executive Director, California Academy of Sciences 		
PRESENT:	Sector Analysis #2	

Session #9 *Discussion Session 3* **Friday, January 26**

CASE: NRDC Headquarters, Santa Monica, California

- Go to: <http://leedcasestudies.usgbc.org/overview.cfm?ProjectID=236>
- Griscom, A. (2003) “Who’s the Greenest of Them All,” *Grist*, November 25, go to: <http://www.grist.org/news/powers/2003/11/25/of/>
- Syska Hennessey Group, Go to: <http://www.syska.com/Energy/projects/nrdc.html>

Session #10 *The Building Hydrologic System* **Tuesday, January 30**

TEXT:

- Kibert, Chapter 8

WEB BASED READINGS:

- Whitaker, B. (2006) “Architects are a Lagging Indicator for Sustainable Design,” *New York Times*, May 17. Go to: Lexus-Nexus in Kresge Library <http://www.bus.umich.edu/KresgeLibrary/>

PRESENT: Sector Analysis #3

Session #11 *Landscaping and Site Design* **Thursday, February 1**

TEXT:

- Kibert, Chapter 6

WEB BASED READINGS:

- Wilson, A. (1994) “Storm-water Management: Environmentally Sound Approaches,” *Environmental Building News*, September/October.
- Wilson, A. (2001) “Development and Nature: Enhancing Ecosystems Where We Build,” *Environmental Building News*, February.
- _____ (2004) *Heat Island Effect: What Can be Done?* (Washington DC: US EPA). Go to: <http://www.epa.gov/hiri/strategies/index.html>
 - Cambridge Systematics (2005) *Cool Pavement Study* (Washington DC: Heat Island Reduction Initiative, US EPA). Go to: http://www.epa.gov/heatisland/resources/pdf/CoolPavementReport_Former%20Guide_complete.pdf

GUEST: The Engineer’s Point of View

- *Scott R. Caesar*, PE, Sr. Vice President, Cosentini Associates (Engineer on New Ross Building)

PRESENT: Sector Analysis #4

Session #12 *Discussion Session 4* **Friday, February 2**

FIELD TRIP: IHM Motherhouse, Monroe Michigan

READINGS: Go to: www.urbancatalystassociates.com, go to “publications and presentations” and click on the case study for the “IHM Motherhouse” – this will describe the site of our field trip.

Session #13 *The Construction Process* **Tuesday, February 6**

TEXT:

- Kibert, Chapters 11 and 12

WEB BASED READINGS:

- American Institute of Architects (2006) *Writing the Green RFP*. Go to: http://www.aia.org/cote_rfps
- Matthiessen, L. and P. Morris (2004) *Costing Green: A Comprehensive Cost Database and Budgeting Methodology* (Boston, MA: Davis Langdon). Go to: <http://www.davislangdon.com/pages/usa/researchpublications.htm>

GUEST: The Contractor's Point of View

- *Ryan Kline*, LEED A.P., Turner Construction Company

PRESENT: Sector Analysis #5

Session #14 *Institutional Supports and Restraints* **Thursday, February 8**

WEB BASED READINGS:

- USGBC (2003) *Building Momentum: National Trends and Prospects for High-Performance Green Buildings* (Washington DC: USGBC). Go to: http://www.usgbc.org/Docs/Resources/043003_hpgb_whitepaper.pdf
- _____ (2005) *The Energy Policy Act of 2005. What the Energy Bill Means to You*, (Washington DC: US Department of Energy). Go to: <http://www.energy.gov/taxbreaks.htm>
- _____ (2005) *Energy Efficient Mortgage Home Owner Guide*, (Washington DC: US Department of Housing and Urban Development). Go to: <http://www.hud.gov/offices/hsg/sfh/eem/eemhog96.cfm>
- _____ (2004) "Chicago mayor Announces All New Public Buildings to be LEED Certified," *Greenbiz*, June 24. Go to: http://www.greenbiz.com/news/news_third.cfm?NewsID=926892

PRESENT: Sector Analysis #6

Session #15 *Discussion Session 5* **Friday, February 9**

ASSIGNMENT: LEED Certification Exercise of the Dana Building

III. Where is Green Development Going?

Session #16	<i>Broadening the Scope</i>	Tuesday, February 13
TEXT:		
■ Kibert, Chapter 14		
WEB BASED READINGS:		
■ Wilson, A. (2006) “Passive Survivability: A New Design Criterion for Buildings” <i>Environmental Building News</i> , May.		
■ Wilson, A. (2006) “Biophilia in Practice” <i>Environmental Building News</i> , July, 1, 12.		
■ _____ (2004) “First US National Effort for Healthy, Eco-Friendly Affordable Housing,” <i>Greenbiz</i> , September 30. Go to: http://www.greenbiz.com/news/news_third.cfm?NewsID=27239		
GUEST: The <u>Architect’s</u> Point of View		
■ <i>Chris Stoddard</i> , Senior Associate Principal, Kohn Pedersen Fox Associates PC.		
CASE: Benny Farm, Montreal, Canada		
■ Greening the Infrastructure at Benny Farm, Pilot Project, Award Entry, Holcim Awards for Sustainable Construction. Packet materials and go to: http://www.holcimfoundation.org/awards/global/CA_detail.html		
PRESENT:	Sector Analysis #7	

IV. Wrap-Up

Session #17	<i>Final Project Presentations</i>	Thursday, February 15
DUE:	Green Construction and Design Project	
PRESENT:	Green Construction and Design Projects	

<i>Discussion Session 6</i>		
Session #18	<i>Final Project Presentations</i>	Friday, February 16
PRESENT:	Green Construction and Design Projects	

Style Guide for References

Please use endnotes for all references in your papers. The form of entries should fit the following format.

Book entries follow this form: Authors' or Editors' Last Names, Initials. Year. *Title of book*. (Italic, lowercase except for the first letter of the first word and the first word after a long dash or colon). City Where Published, with abbreviation for state or province (North America) or full name of country, only if needed to identify a small city: Name of Publisher. Examples:

Granovetter, M.S. 1965. *Getting a job: A study of contracts and careers*. Chicago: University of Chicago Press.

Kahn, R. L., & Boulding, E. (Eds.). 1964. *Power and conflict in organizations*. Glencoe, IL: Free Press.

R. Harbridge (Ed.) *Employment contracts: New Zealand experiences*. Wellington, New Zealand: Victoria University Press.

National Center for Education Statistics. 1992. *Digest of education statistics*. Washington DC: National Center for Education Statistics.

Periodical entries follow this form: Authors' Last Names, Initials. Year. Title of article or paper (in lowercase letters except for the first letter of the first word and the first word after a long dash or colon). *Name of Periodical*, volume number (issue number, *if needed*—see below): page numbers. Examples:

Shrivastava, P. 1995. The role of corporations in achieving ecological sustainability. *Academy of Management Review*, 20: 936-960.

Nonaka, I. 1991. The knowledge-creating company. *Harvard Business Review*, 69(6): 96-104.

Include an issue number *only* if every issue of the referenced periodical begins with a page numbered 1. (Look at more than one issue to check.)

If an article has no author, the periodical or producing body is referenced:

BusinessWeek. 1998. The best B-schools. October 19: 86-94

Chapters in books (including annuals) follow this form: Authors' Last Names, Initials. Year. Title of chapter (in lowercase letters except for the first letter of the first word and first word after a colon). In Editors' Initials and Last Names (Eds.), *Title of book*: page numbers. City Where Published, State or Country (only if necessary to identify the city): Name of Publisher. Examples:

Levitt, B., & March, J.G. 1988. Organizational learning. In W.R. Scott & J.F. Short (Ed.), *Annual review of sociology*, vol. 14: 319-340. Palo Alto, CA: Annual Reviews.

Dutton, J., Bartunek, J., & Gersick, C. 1996. Growing a personal, professional collaboration. In P. Frost & S. Taylor (Eds.), *Rhythms of academic life*: 239-248. Newbury Park, CA: Sage.

For *unpublished* papers, dissertations, and papers presented at meetings:

Duncan, R. G. 1971. *Multiple decision-making structures in adapting to environmental uncertainty*. Working paper no. 54–71, Northwestern University Graduate School of Management, Evanston, IL.

Smith, M. H. 1980. *A multidimensional approach to individual differences in empathy*. Unpublished doctoral dissertation, University of Texas, Austin.

Wall, J. P. 1983. *Work and nonwork correlates of the career plateau*. Paper presented at the annual meeting of the Academy of Management, Dallas.

For an *electronic document*, include the author's name, if known; the full title of the document; the full title of the work it is part of; the ftp, http, or other address; and the date the document was posted or accessed.