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**instructor:** James Peters  
**course title:** North American Building Traditions  
**institution:** University of Massachusetts, Amherst  
**date offered:** Fall, 2009

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# North American Building Traditions

James S. Peters

Building and Construction Technology

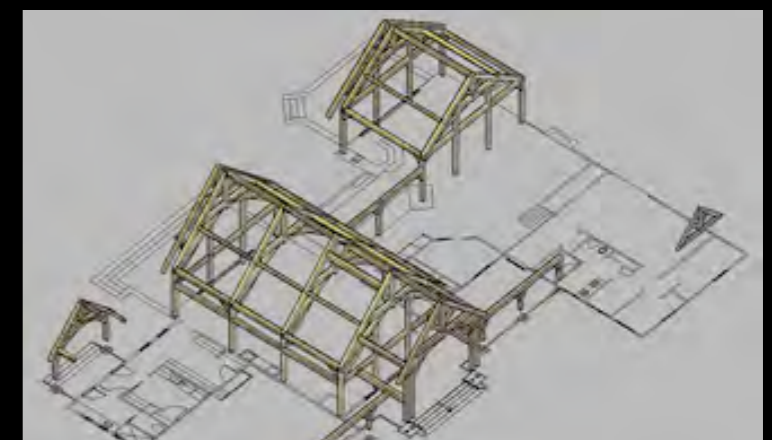
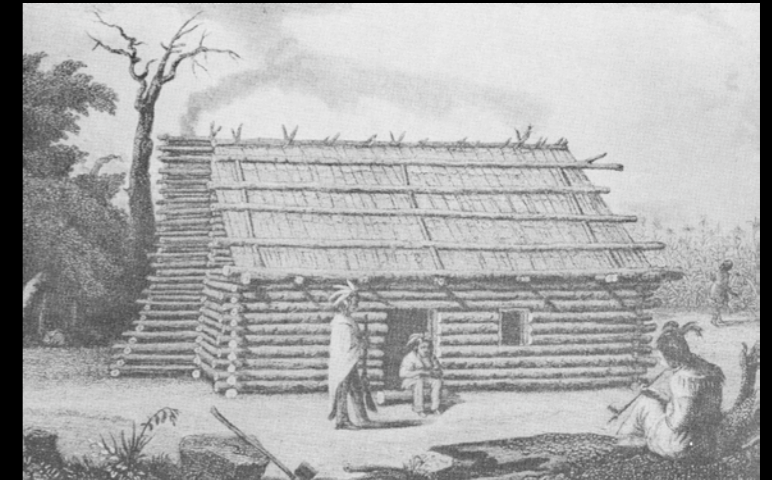
Dept. of Environmental Conservation

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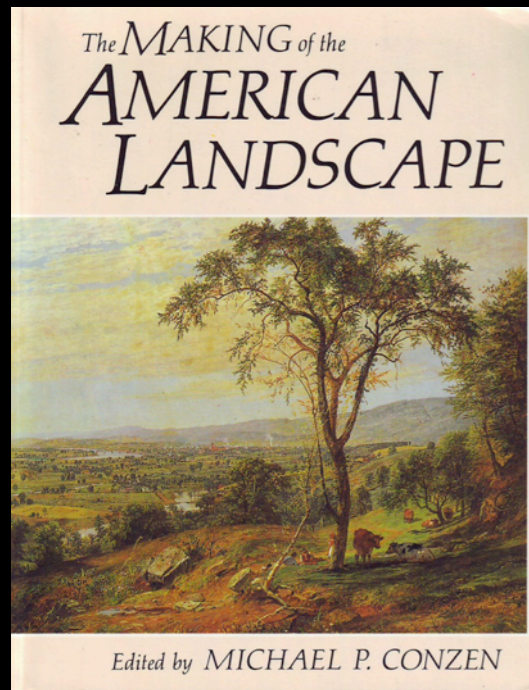
Traditional knowledge and selection of building materials is based on a deep understanding of nature and the uses and limitations of natural materials. Because traditional methods are handed down from generation to generation, today's craft builders participate in traditions that originated deep in pre-history. The course will provide students with an opportunity to learn about North American handcraft, log and timber frame building. After reviewing the properties of wood, *craftsmanship*, and *traditional knowledge* and the geography of North American forests, the class will discuss studies of building technology, vernacular architecture, and cultural geography. Student projects will document historical and contemporary log and timber frame craftsmen and craft structures. Course content includes:

- ☛ Wood, craftsmanship, and traditional knowledge; geography of North American forests;
- ☛ Pre-European contact Native American building;
- ☛ European log and timber frame building traditions implanted in N. America;
- ☛ The N. American settlement landscape (building on the frontier and during the early European settlement period);
- ☛ The development of stick built methods, the craftsman movement, development of the iconography of early American building;
- ☛ Contemporary handcraft log and timber frame design and construction.



<u>Week</u>	<u>Date</u>	<u>Topic</u>
1	9/8	Overview of the course
	9/10	Properties of wood
2	9/15	<i>Craft and craftsmanship</i>
	9/17	<i>Traditional knowledge</i>
3	9/22	Geography of North American forests
	9/24	Pre-European contact Native American building
4	9/29	Pre-European contact Native American building <i>cont'd.</i>
	10/1	European log/timber frame building
5	10/6	European log/timber frame building <i>cont'd.</i>
	10/8	The N. Am. settlement landscape
6	10/13	No class (Monday schedule)
	10/15	Building on the N. Am frontier
7	10/20	Building during the early settlement period
	10/22	Development of “stick-built” methods
8	10/27	The Craftsman movement
	10/29	The Iconography of early American building
9	11/3	Review
	11/5	Mid-term examination
10	11/10	Contemporary handcraft LOG intro.
	11/12	Contemporary handcraft TIMBER FRAME intro.
11	11/17	Contemporary handcraft LOG (PROJECT summary due)
	11/19	Contemporary handcraft TIMBER FRAME
12	11/24	Contemporary handcraft TIMBER FRAME <i>cont'd.</i> (PROJECT proposal due)
	11/26	No Class (Thanksgiving recess)
13	12/1	Student PROJECTS
	12/3	Student PROJECTS <i>cont'd.</i>
14	12/8	Student PROJECT presentations
	12/10	Student PROJECT presentations <i>cont'd.</i>

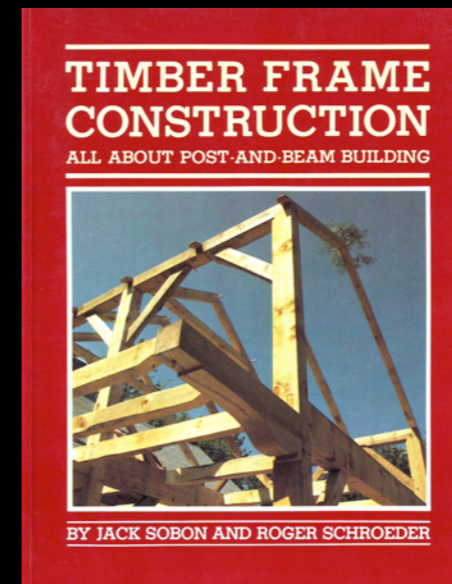
# Schedule



Conzen, 1990, *The Making of the American Landscape*



Chambers. 2003. *Log Construction Manual: The Ultimate Guide to Building Handcrafted Log Homes*



Sobon & Schroeder. *Timber Frame Construction: All About Post-and-Beam Building*

**Textbooks** (*not required*)

# Properties of wood

Hoadley. 2000. *Understanding Wood*

USDA Forest Service. 1999. *Wood Handbook*

Berge. 2000. “Plants” in *Ecology of Building Materials*

Larsen & Marstein. 2000. “Like seasoned timber, never gives: the durability of wood as a building material” in *Conservation of Historic Timber Structures*

Noble. 2007. “Building materials and construction methods: wood and related materials” in *Traditional Buildings: A Global Survey of Structural Forms and Cultural Functions*

Sobon & Schroeder. 1984. “The wood” in *Timber Frame Construction: All About Post-and-Beam Building*

# Craft and craftsmanship

Kubler. 1962. “The history of things” in *The Shape of Time: Remarks on the History of Things*

Larsen & Marstein. 2000. “The sustainability of traditional materials and craftsmanship” in *Conservation of Historic Timber Structures*

Sennet. 2008. “The troubled craftsman” in *The Craftsman*

Risatti. 2007. “Technical knowledge and technical manual skill” & “Hand and body in relation to craft” in *A Theory of Craft: functional and aesthetic expression*

Green. 2006. “Shelter” in *Wood: Craft, Culture, History*

# Traditional knowledge

Snively. “Honoring aboriginal science knowledge in an environmental education graduate program” in Menzies, 2006, *Traditional Ecological Knowledge and Natural Resource Management*

Kubler. 1962. “The classing of things” in *The Shape of Time: Remarks on the History of Things*

Berkes. 1999. “Context of traditional ecological knowledge” in *Ecology: Traditional Ecological Knowledge and Resource Management*

Noble. 2007. “Introduction: terminology and disciplines” in *Traditional Buildings: A Global Survey of Structural Forms and Cultural Functions*

Oliver. “Technology Transfer - a Vernacular View” in Cole & Lorch, 2003, *Buildings, Culture and Environment: Informing local and global practices*

Hansen & VanFleet. 2003. “Introduction” & “Exercises: identifying traditional knowledge” in *Traditional Knowledge and Intellectual Property*

# Geography of North American forests

Little, Elbert L. 1971. *Atlas of United States Trees* (Volumes 1-4)

Bailey. 1995. “Description of the Ecoregions of the United States” (USFS online)

Eyre. 1980. *Forest Cover Types of the United States and Canada*

Foster *et al.* “The environmental and human history of New England” in Foster & Aber, 2004, *Forests in Time: The Environmental Consequences of 1,000 Years of Change in New England*

Trimble, “Nature’s continent” & Williams, “The clearing of the forests” in Conzen, 1990, *The Making of the American Landscape*

Sturges. 1992. “An Exploration of the Relationships Between Houses and Forests in American History” in *Journal of Architectural Education*

# Pre-European contact Native American building

Nabokov & Easton. 1989. “Wigwam and longhouse,” “Mound, town, and chickee,” “Pit house and extended tipi,” “Plank house,” “Wood earth, and fiber” and “Hogan, Ki, and ramada” in *Native American Architecture*

Butzer. 1990. “The Indian legacy in the American landscape” in Conzen, *The Making of the American Landscape*

Driver & Massey. 1957. “Comparative Studies of North American Indians” (housing and architecture) in *Transactions of the American Philosophical Society*

Vastokas. 1969. “Architecture and Environment: The Importance of the Forest to the Northwest Coast Indian” in *Forest History*

# European log and timber frame building

Jordan. 1985. “Log construction in American culture,” “Northern Europe,” “The Alps and Southwestern Germany,” and “The German-Slavic borderland” in *American Log Buildings: An Old World Heritage*

Benson. 1997. “Evolution” in *The Timber-Frame Home*

Cummings. 1979. “The English background” and “English regional derivations and evolutionary trends” in *The Framed Houses of Massachusetts Bay 1625-1725*

# The North American settlement landscape, building on the frontier

Kniffen & Glassie. 1965. "Folk housing: key to diffusion" in *Annals of the Association of American Geographers* and 1966. "Building in Wood in the Eastern United States: A Time-Place Perspective" in *Geographical Review*

Wonders. 1979. "Log dwelling in Canadian folk architecture" in *Annals of the Association of American Geographers*

Jordan. 1978. "A regional folk architecture" in *Texas Log Building: A Folk Architecture*

Cummings. 1979. "The builders and their resources," "Assembly and rearing of the house frame," and "Toward an American architecture" in *The Framed Houses of Massachusetts Bay 1625-1725*

Jordan. 1985. "Midland American log construction" in *American Log Buildings: An Old World Heritage*

## Development of "stick-built" methods

Peterson. 1992. "The balloon frame structural system" in *Homes in the Heartland: Balloon Frame Farmhouses of the Upper Midwest, 1850-1920*

Cavanagh. 1997. "Balloon Houses: The Original Aspects of Conventional Wood-Frame Construction Re-Examined" in *Journal of Architectural Education*

Peterson. 2000. "Anglo-American Wooden Frame Farmhouses in the Midwest, 1830-1900: Origins of Balloon Frame Construction" in *Perspectives in Vernacular Architecture*



# The Craftsman movement/ iconography of early American building

Malo. 1998. "Inventing the Adirondack Log Villa: From Woodsman's Cabin to Rustic Lodge" in *APT Bulletin*

McClelland. 1998. "Sources of rustic architectural design" in *Building the National Parks*

Kaiser. 1982. "The camp era begins," "William West Durant: the man and his camps," and "A camp is a camp" in *Great Camps of the Adirondacks*

# Contemporary handcraft log construction

Mackie. 1997. *Building with Logs*

Chambers. 2003. *Log Construction  
Manual: The Ultimate Guide to  
Building Handcrafted Log Homes*

International Log Builders' Association. 2009.  
Website ([www.logassociation.org](http://www.logassociation.org))

# Contemporary handcraft timber frame construction

Sobon & Schroeder. 1984. *Timber  
Frame Construction: All About Post-  
and-Beam Building*

Chappell. 2005. *A Timber Framer's Workshop: Joinery,  
Design & Construction of Traditional Timber Frames*

Benson. 1997. *The Timber-Frame  
Home*

Timber Framers Guild. 2009. Website  
([www.tfguild.org](http://www.tfguild.org))