

TECHNICAL STUDIES DIPLOMA SCHOOL READING LIST 2011/12

4th Year Courses: Term 1 only

This reading list has been given to the library by the course tutor. Please note that the library holds as many items as possible from this list, however if any items are not held in the library's collection, these may be requested via Inter-library loan at the issue desk.

Some items may be shared with other programmes or located in other parts of the library. For location details please consult the online library catalogue.

The TS courses are listed in alphabetical order by course tutor surname

Form and Matter Christina Doumpioti

Materials:

- Ashby, M., 2010. Materials and design: the art and science of material selection in product design 2nd ed., Amsterdam; Boston; London: Butterworth-Heinemann.
- Ball, P., 1997. Made to measure: new materials for the 21st century, Princeton: Princeton University Press.
- Beylerian, G., 2005. Material ConneXion: the global resource of new and innovative materials for architects, artist and designers, Londres: Ed. Thames & Hudson.
- Brownell, B., (2006,2008, 2010). Transmaterial 1,2,3: a catalog of materials that redefine our physical environment, New York: Princeton Architectural Press.
- Hensel, M., Menges, A., Architectural Association (Great Britain), 2006. Morphoecologies, London: Architectural Association.
- Kula, D. & MatériO (Firm), 2009. Materiology: the creative's guide to materials and technologies, Amsterdam; Basel; Boston: Frame Publishers; Birkhäuser.
- Lefteri, Ch., (2007). Materials for Inspirational Design, Laurence King.
- Lynn, G., (2010). Composites, surfaces, and software: high performance architecture 1st ed., New Haven Conn.; New York: Yale School of Architecture; Distributed by W.W. Norton & Co.

Smart materials:

- Addington, M. and D. Schodeck. (2005). Smart materials and Technologies: for the architecture and design professions, Oxford: Architectural Press.
- Klooster, T., 2009. Smart surfaces: and their application in architecture and design, Basel;Boston: Birkhäuser.
- Ritter, A., 2007. Smart materials: in architecture, interior architecture and design, Basel;Berlin;Boston: Birkhäuser - Publishers for Architecture.

Structures:

- Bechthold, M., (2007). Innovative surface structures: technologies and applications, London: Taylor & Francis.
- Gordon, J., (2003). Structures, or, why things don't fall down 2nd ed., New York: Da Capo Press.
- Hensel M., Menges A. Weinstock M. eds, (2006). "Techniques and Technologies in Morphogenetic Design," AD Architectural Design, vol. 76/2.
- Ruby, I., 2010. Re-inventing construction, Berlin: Ruby Press.
- Series of Books from Institute of Lightweight Structures. UNIVERSITÄT STUTTGART. Institut für Leichte Flächentragwerke. [@ AA library]

Fabrication:

- Barkow, F. & Barkow Leibinger Architekten. Architectural Association (Great Britain), 2009. An atlas of fabrication, London: AA Publications.
- Lefteri, C., 2007. Making it: manufacturing techniques for product design, London: Laurence King.
- Thompson, R., 2007. Manufacturing processes for design professionals, New York: Thames & Hudson.
- Wanberg, J., 2009. Fabrication handbook 1, Stillwater Minn. ; Enfield: Wolfgang; Publishers Group UK [distributor].

Design and Biology:

- Ball, P., 2001. The self-made tapestry: pattern formation in nature, Oxford; New York: Oxford University Press.
- Gruber, P., 2011. Biomimetics in architecture: architecture of life and buildings, Wien; New York: Springer.
- Jeronimidis, G. (2004). Biodynamics. In Emergence: morphogenetic design strategies, Eds. M. Hensel, A. Menges and M. Weinstock, 90-95. London: AD Wiley.
- Mattheck, C., 1998. Design in nature: learning from trees, Berlin; New York: Springer-Verlag.
- Thompson, D., 1992. On growth and form An abridged ed. /. Cambridge: Cambridge University Press.
- Vogel, S., 2003. Comparative biomechanics: life's physical world, Princeton NJ: Princeton University Press.

Environmental Engineering of Tall Buildings

Ian Duncombe

1. The Environmental Performance of Tall Buildings – Joana Carla Soares Goncalves with Erica Mitie Umakoshi
2. Eco Skyscrapers – Ken Yeang
3. Eco Skyscrapers Volume 2 – Ken Yeang
4. Tall Buildings – A Strategic Design Guide – British Council for Offices and RIBA

Process in the Making **Wolfgang Frese**

- An Engineer imagines, Peter Rice Artemis 1993
- W. McLean and P. Silver: Fabrication: a Designers Guide (Architectural press 2006)
- Buckminster Fuller, Your private Sky, Lars Mueller, 2001
- P. Ball, Made to Measure, new materials for the 21st century. Princeton university press 1997
- Lightness, 010 Publishers, Rotterdam, 1998
- Glass, Structure and Technology, Stefan Behling. Prestel 1999
- Sauer C.: Made of...., Gestalten 2010
- Planning to build?, A practical introduction to the construction industry. CIRIA Architectural Knowledge, Francis Duffy, Spon 1998
- Constructing the team, Sir Michael Latham, Stationary office, 1994
- Future Materials Magazine

Material/research related websites:

- <http://www.transstudio.com/>
- <http://www.materialexplorer.com>
- <http://www.materia.nl>
- <http://www.materialconnexion.com>
- <http://www.ics.uci.edu/~epstein/junkyard/all.html>
- <http://www.tnw.tudelft.nl>

Small in Large – the Interrelation of Component and System **Martin Hagemann**

Buckminster Fuller: Starting with the Universe
ARCH+ (188): Form Follows Performance
Edition DETAIL: Components and Systems: Modular Construction
Philosophy of Structures by Eduardo Torroja
Components and Connections: Principles of Construction
Performative Architecture: Beyond Instrumentality
Pamphlet Architecture 27: Tooling
Innovation in Architecture (Brookes and Poole): essays
Adaptronic Systems (Janocha) -architectural part
Algorithmic Architecture (K. Terzidis)

Studies in Advanced Structural Design **Emanuele Marfisi**

An Engineer Imagines by Peter Rice, Ellipsis Press, 1998
Happold: The confidence to build by Derek Walker, Bill Addis, Spon Press, 1998
Informal by Cecil Balmond, Prestel USA, 2007
Creativity and innovation: the structural engineer's contribution to design by Bill Addis and William Addis, Architectural Press, 2001

Environmental Modelling & Simulation **Simos Yannas**

CIBSE (2006) *Environmental Design. Guide A*. Chartered Institution of Building Services Engineers, London.

Jones, P. (2008). *Thermal Environment*. In **Metric Handbook**. Third Edition. Architectural Press.

Koch-Nielsen, H. (2002). **Stay Cool**. James & James Ltd.

Szokolay, S. (2008). *Introduction to Architectural Science*. Architectural Press.

Yannas, S., E. Errell and J.-L. Molina (2006) *Roof Cooling Techniques*. Earthscan.

Yannas, S. (2009). *Adaptive Environments*. A conversation with Anne Save de Beurecueil and Franklin Lee. In **Articulated Grounds**, pp20-24. AA Agendas No.7, AA Publications.

Yannas, S. (2011). *Adaptive Strategies for an Ecological Architecture*. **AD** Architectural Design Special Issue, John Wiley & Sons Ltd.

Form, Energy and Environment **Mohsen Zikri**

1.Books:-

The Green Building Bible 3rd Edition Volume 1 (Publisher: Green Building Press) 2006

The Green Building Bible 3rd Edition Volume 2 (Publisher: Green Building Press) 2006

Environmental Science in Buildings (5th Edition) by Randall Mc Mullan

The Designer's Atlas of Sustainability – Island Press (2007)

Towards a Green Architecture - Robert & Brenda Vale, 1990

Articles by Ove Arup on interdisciplinary design

An Engineer Imagines - Peter Rice

The Idea of Building - Steven Groak

Arups on Engineering, Ed Dunster, Ernst & Sohn 1996 (Green Buildings by John Berry –
Simulating the Acoustic Environment by Richard Cowell – Environmentalism and Efficient
Engineering by Lorna Walker – Neither Seen nor Heard by Tony Marriott.

Sir Norman Foster – Commerzbank, Frankfurt Volker Fischer - Horst Gruneis, 1997

Commerzbank Frankfurt – Prototype for an Ecological High-rise - Colin Davies, 1997

Intelligent Glass Façade - Andrea Compagno, 1995

The Architecture of Richard Rogers - Deyan Sudjic, 1994

The Work of Michael Hopkins and Partners - Colin Davies, 1993

Richard Rogers: Cities for a Small Planet – 1997

Le Corbusier: Ideas and Forms – Rizzoli International Publications 1986

Norman Foster: A Global Architecture – Martin Pawley 1999

The Skyscraper Bioclimatically Considered - Ken Yang

BCO Guide for Tall Buildings (RIBA publication)

Renzo Piano Building Workshop, Volume 2 - Peter Buchanan

Energy Conscious Design – Batsford

Natural Energy and Vernacular Architecture - Hassan Fathi

The Architecture of the Well-tempered Environment, Architectural Press 1969

2. Journals:-

BedZed (Beddington Zero Carbon) articles – Bill Dunster and Arup
Architect Review Feb 99 pg. 52-55 – Green on Show PD
RIBA Profile April 1997 pg. 6-9 Time and energy David Turrent
RIBA Profile April 1997 pg. 12-15 – Eco Chambers Dr Susan Roaf
RIBA Profile April 1997 pg. 18-27 – The Functional tradition Professor Dean Hawkes
AJ 10 Oct 1996 pg. 29-37 – Building study – Thames valley university LRC Jeff Parkes & Peter Moseley
RIBA Journal September 1998 pg. 68-71 – Air Force One – Natural air-conditioned building Vicky Richardson
AD Jan 1997 pg. 27-31 – Research into sustainable architecture Bill Dunster & John Pringle
Building 20 March 1992 pg. 34-36 – Powerhouse – Parliamentary accommodation Martin Spring
AJ 21 Dec 1995 pg. 37 – Passive cooling put to the test
AD Jan 1997 pg. 39-41 – Rogers – Daimler Benz Offices
Arup Journals Apr 1997 + Jan 2001- Berlin Velodrome & Swimming Pool complex
Arup Journal 2/200 – GSW Headquarters, Berlin (p8-10)
Arup Journal Apr 1995 pg. 11-17 – The New Inland Revenue Centre, Nottingham
Arup Journal Jan 1997 pg. 3-8 – Eastgate, Harare, Zimbabwe
Arup Journal Apr 1997 pg. 32-35 – Smart technology in construction
Arup Journal Apr 1996 pg. 8-10 – The future of intelligent building
Architecture July 1995 pg. 61-65 – Sustainable Cities Bradford McKee
AJ July 1992 pg. 39-42 – Intelligent buildings, Europe tomorrow Barrie Evans
Architecture July 1995 pg. 77-83 – High Dividends – Inland Revenue, Nottingham Peter Cuchanan
Building no. 56 1995 pg. 24-33 – Tax haven: Hopkins & Partners at Nottingham Peter Fawcett
AR (Architect Review), Richard Rogers, April 1992
Architecture Today, Solar Synthesis – Solar Office at Duxford, June 1998
World Architecture, Sustaining an Argument, March 1999
Global Architecture Document, Museum of Contemporary Arts, Helsinki, September 1996
Baulwelt, Ionica Building, September 1996

3. Other Journals

Reference to relevant articles in following specialised journals is recommended:

-**Bsj** (Building Services Journal) by Chartered Institute of Building Services Engineers (CIBSE)

-**ASHRAE Journal** by American Society of Heating Refrigeration & Air Conditioning Engineers (ASHRAE)

4. Design Manuals:-

- Chartered Institute of Building Services (CIBSE) – Design Guides series.

- American Society of Heating Refrigeration & Air Conditioning Engineers (ASHRAE) - Design Handbooks series.