

**New Jersey Institute of Technology**  
Department of Humanities and Social Sciences

**STS 310**

**TECHNOLOGY AND CONTEMPLATION**

Spring 2001

M & W 10-11:20,  
Office: Cullimore 318, M 2:30-5

Prof. David Rothenberg  
tel. 596-3289  
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Here's the story. This semester I've received a grant from the Nathan Cummings Foundation and the Fetzer Institute to introduce *contemplative practice* into the engineering curriculum. This means meditation – disciplined contemplation as a different kind of thinking around questions of technology. Not necessarily Buddhist, Christian, Jewish, or Hindu meditation, but meditation itself, learning from various traditions but not tied to one or another. Can meditative thinking help us solve technical problems? Or is it an about-face from technical thinking, something that broadens our lives in a more general way? We will investigate this, and participate in a collective experiment that has not been tried at any technical university in this country. This will be one of the most unusual classes you will take at NJIT, so I urge you to stay along for the ride. Your understanding of technology and of human values will never be the same.

**REQUIRED TEXTS:**

Clark Strand, *The Wooden Bowl*, (Hyperion)  
Ilana Rabinowitz, *Mountains are Mountains and Rivers are Rivers*, (Hyperion)  
Stewart Brand, *The Clock of the Long Now*, (Basic)  
Tyler Volk, *Metapatterns*, (Columbia)

Xeroxed reader, including Edward de Bono, *New Think*, and readings from Christopher Alexander, Robert Pirsig, James Carse, and others.

**COURSE REQUIREMENTS:**

Two five page essays. Midterm exam. Final exam. Class participation. Meditation log. Final grade is a fair combination of the above.

## COURSE SCHEDULE

- Jan. 22 WB, Beginning meditation, pp. 1-15.
- Jan. 24 MR, Zen and the Art of Archery, pp. 121-125.  
MR, Zen and the Art of Motorcycle Maintenance, pp. 183-186.
- Jan. 29 WB, Starting with nothing, pp. 16-23. MR, Opening and Questioning, pp. 13-26
- Jan. 31 Christopher Alexander, xeroxed readings.
- Feb. 5 NT, Vertical vs. Lateral Thinking, pp. 11-34.
- Feb. 7 WB, Breath, pp. 24-33. MR, What Practice Is?, pp. 197-204.
- Feb. 12 WB, Body and mind, pp. 38-46.
- Feb. 14 NT, Different ways of seeing the same thing, pp. 35-92.  
**First paper due.**
- Feb. 19 WB, Finding your rhythm, pp. 50-58. NT, Arrogance and chance, pp. 93-119.
- Feb. 21 WB, Too Easy!, pp. 62-70. NT, Application, pp. 120-153.
- Feb. 26 WB, Discipline, pp. 71-82. *Metapatterns*. Spheres, sheets, and tubes.
- Feb. 28 WB, Concentration, pp. 89-103. *Metapatterns*. Borders and binaries.
- Mar. 5 WB, Problems, pp. 104-117. *Metapatterns*. Centers and layers.
- Mar. 7 **Midterm exam**
- Mar. 12-16 *Spring Break*
- Mar. 19 WB, Forgetting, pp. 118-133. MR, Attention, pp. 39-52.  
*Metapatterns*. Calendars and arrows.
- Mar. 21 WB, Sharing, pp. 139-154. MR, The Listening Mind, pp. 61-68.  
*Metapatterns*. Breaks and cycles.
- Mar. 26 WB, Relinquishing, pp. 155-167. MR, What is the Right Thing to Do?, pp. 72-87.
- Mar. 28 **Guest Speaker**
- Apr. 2 no class
- Apr. 4 Clock of the Long Now. MR, Pressure and Flow, pp. 158-180.
- Apr. 9 Clock of the Long Now. MR, How to Cook, pp. 96-99.
- Apr. 11 Clock of the Long Now. Carse.
- Apr. 16 MR, Aitken on Delusion, pp. 229-236. Mindfulness vs. Concentration, pp. 239-245.
- Apr. 18 no class
- Apr. 23 **Guest Speaker**
- Apr. 25 **Guest Speaker**
- Apr. 30 WB, Sunrise, pp. 168-185. MR, Zen in Business, pp. 105-118.
- May 2 Conclusion: Mindfulness in Technology. **Final Paper due.**

**FINAL EXAM DATE TO BE ANNOUNCED**

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## REVISED 2nd HALF COURSE SCHEDULE

- Mar. 12-16 *Spring Break*
- Mar. 19 Tyler Volk visits class.
- Mar. 21 WB, Forgetting, pp. 118-133. MR, Attention, pp. 39-52.  
*Metapatterns*. Calendars and arrows.
- Mar. 26 WB, Sharing, pp. 139-154. MR, The Listening Mind, pp. 61-68.  
*Metapatterns*. Breaks and cycles. **Final paper assigned.**
- Mar. 28 WB, Relinquishing, pp. 155-167. MR, What is the Right Thing to Do?, pp. 72-87.
- Apr. 2 Clock of the Long Now. MR, Pressure and Flow, pp. 158-180.
- Apr. 4 Clock of the Long Now. MR, How to Cook, pp. 96-99.
- Apr. 9 Clock of the Long Now. Carse.
- Apr. 11 MR, Aitken on Delusion, pp. 229-236. Mindfulness vs. Concentration, pp. 239-245.  
John Wiczorek visits.
- Apr. 16 WB, Sunrise, pp. 168-185. MR, Zen in Business, pp. 105-118.
- Apr. 18 **Guest Speaker**
- Apr. 23 Film: Lucky People Center International
- Apr. 25 **Guest Speaker**
- Apr. 30 Conclusion: Mindfulness in Technology.
- May 2 **Final paper due in my office.**

**FINAL EXAM DATE TO BE ANNOUNCED**

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MIDTERM EXAM

March 7, 2001

Please write an brief, organized, well-written essay in response to **all five** of the following questions. You will have one hour and twenty minutes for the exam, just over fifteen minutes a question. Please write legibly and coherently. Think before you start scratching the paper with the pen. Rely on arguments, not just opinions. *Please follow instructions carefully.*

1. According to Clark Strand, exactly what should you do while meditating? Is it easy or hard?
2. Why is Christopher Alexander's "quality without a name" not just about architecture?
3. What is the grape-moon koan? How does it explain why the sphere is the metapattern to begin all metapatterns?
4. In *Zen and the Art of Archery*, why does the Master tell the student that he should grasp the bow the way a little child picks up a block?
5. Give one of de Bono's examples of how lateral thinking is important in the history of technology, and then answer the following question: What's the difference between lateral thinking and meditation?
6. When you are done with this exam, do not leave the classroom. Turn it in to me, then return to your seat, sit down, and meditate for the rest of the class period. Don't worry, it's good for you.

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FINAL EXAM

May 2, 2001

Please write a brief, organized, well-written essay in response to **each of the five** following questions. You will have one hour and a half for the exam, just over eighteen minutes a question. Please write legibly and coherently. Think before you start scratching the paper with the pen. Rely on arguments, not just opinions. *Please follow instructions carefully.*

1. Before doing anything else, close your eyes, sit, breathe in and out. For fifteen minutes. Stop. What's going on in your mind?
2. Why would a man who spent years designing the world's fastest computers want to switch to making the world's slowest computer? Who is this man and what is his project?
3. Describe one character from the film *Lucky People Center International*, and what their story has to do with the conjunction of contemplation with technology.
4. Brian Eno said he wanted to live in the present, but also make the present endure as much as possible. What is the name he came up with for this concept, and what does it have to do with meditation?
5. Does meditation help you solve technical problems or forget technology? Give one practical example to back up your answer.