CRN# 23249 CPET 575 Management of Technology

Spring 2009
Paul Lin, Professor of ECET

Course Description

CPET 575 Management of Technology, Class 3, Cr. 3
This course introduces conceptual foundation and the method for managing technology and innovation. Topics includes technology and society; technology development infrastructure; technology and strategy; technology competitive analysis, forecasting and assessment; techniques for dealing with risk, uncertainty and change; tools and best practices for technology lifecycle management; government, societal, and international issues. A combination of lectures, reading, presentation and reports, a variety of case studies and group discussions is used.

Prerequisite: B.S. in EET, CPT, or EE; or Senior/Graduate standing with the consent of instructor.

Instructor Information
Paul I-Hai Lin, Professor of Electrical and Computer Engineering Technology
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2101 Coliseum Blvd E, Fort Wayne, IN 46805
Office: ET 205C Phone: 260-481-6339 Email: lin@ipfw.edu
Office Hours:
- Tuesday 2:00 - 5:00 PM
- Wednesday 3:00 - 5:00 PM
- Thursday 2:00 – 5:00 PM
- Other weekday hours – by appointment

Lecture:
Lecture ET 335 Tuesday 6:00-8:45PM
Course Web site: http://www.etcs.ipfw.edu/~lin

Course Outcomes

The primary objective of this course is to discuss cutting-edge technology management concepts, tools, and techniques that effectively work in today’s technology-intensive organization. Upon successful completion of this course, students will be expected to be able to

1) Be familiar with contemporary work processes such as concurrent engineering, design-build, integrated product
2) Use special tools and techniques for effectively managing technology-based projects
3) Apply proper methods for assessing the effectiveness and performance of the organization and its management processes
4) Prepare technology project reports, and make presentations
5) Develop critical analysis and strategic decision skills needed in management of technology

Disabilities Statement: If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of Services for Students with Disabilities (Walb,
room 113, telephone number 481-6658), as soon as possible to work out the details. Once the Director has provided you with a letter attesting to your needs for modification, bring the letter to me. For more information, please visit the web site for SSD at http://www.ipfw.edu/ssd/

Class Activities, Expectations, Grading

- The class format will be 3 hour lecture each week, 16 weeks total.
- Active student participations in presenting case studies, articles and papers from the recent literature, class case studies/discussion, and a team-based final project and presentation are expected.
- Student assignments include assignments on case studies, reading technical papers and/or articles and writing short summary for each paper.
- Case studies and presentations: Each student will take responsibility for “leading” the discussion of a minimum of two case studies (details and sign-up will be discussed in first class)
- Term project: students will complete a term project working in groups of 2-3 students, prepare progress reports, present projects in class and complete a written project report. Guidelines for the project will be provided in the class.

Grading:

- Individual reading assignment and summary reports – 15%
- Case studies and presentations – 25%
- Mid-term take-home exam – 10%
- Team-based term project (report 30%, presentation 10%) – 40%
- Class participation (attendance, class discussion, etc) – 10%

Grading Scale: A (90-100%), B (80 -89%), C (70-79%), D (60-69%), F (0-59%)

*No late assignment, reports, etc, will be accepted, unless a previous arrangement is made.

Required Text:

Recommended Text:

Tentative Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Class Activities: Readings &amp; Exercises</th>
<th>Assignments (due for grading)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/13</td>
<td>Challenges of Management of Technology</td>
<td>TBD</td>
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<tr>
<td>2</td>
<td>1/20</td>
<td>Managing Technology in e-Business World</td>
<td>TBD</td>
<td>Case #1, two-page analysis</td>
</tr>
<tr>
<td>3</td>
<td>1/27</td>
<td>Organizing the High-Tech Enterprise</td>
<td>TBD</td>
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<tr>
<td>4</td>
<td>2/3</td>
<td>Concurrent Engineering &amp; Integrated Product Development</td>
<td>TBD</td>
<td>Case #2, two-page analysis</td>
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<tr>
<td>5</td>
<td>2/10</td>
<td>Management &amp; Leadership in Technology</td>
<td>TBD</td>
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<tr>
<td>6</td>
<td>2/17</td>
<td>Managing Technology-Based Projects</td>
<td>TBD</td>
<td>Case #3, two-page analysis</td>
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<tr>
<td>7</td>
<td>2/24</td>
<td>Measuring &amp; Controlling the</td>
<td>TBD</td>
<td>Team-based term</td>
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<tr>
<td>Week</td>
<td>Date</td>
<td>Description</td>
<td>Code</td>
<td>Notes</td>
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<tr>
<td>8</td>
<td>3/3</td>
<td>Technology Project Evaluation, Selection, and Forecasting</td>
<td>TBD</td>
<td>Take-home midterm</td>
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<tr>
<td>9</td>
<td>3/10</td>
<td>No Class: Spring Break 3/9 begin</td>
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<tr>
<td>10</td>
<td>3/17</td>
<td>Leading Technology Teams</td>
<td>TBD</td>
<td>*Term-project progress report</td>
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<tr>
<td>11</td>
<td>3/24</td>
<td>Managing R&amp;D and Technological Innovation – Part 1 of 2</td>
<td>TBD</td>
<td>Case #4, two-pages</td>
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<td>12</td>
<td>3/31</td>
<td>Managing R&amp;D and Technological Innovation – Part 2 of 2</td>
<td>TBD</td>
<td>Case #5, two-page</td>
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<td>13</td>
<td>4/7</td>
<td>New-High Tech Ventures</td>
<td>TBD</td>
<td>*Term-project progress report</td>
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<td>14</td>
<td>4/14</td>
<td>Managing Risks in High Tech</td>
<td>TBD</td>
<td>Case #6, two-page</td>
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<td>15</td>
<td>4/21</td>
<td>Technology Strategy – Part 1 of 2</td>
<td>TBD</td>
<td>*Term-project progress report</td>
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<td>16</td>
<td>4/28</td>
<td>Technology Strategy – Part 2 of 2</td>
<td>TBD</td>
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<td>17</td>
<td>5/5</td>
<td>Final Project – Presentation (5:45 – 8:00 PM)</td>
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**References**


[21] Others TBA