Junior Seminar, Fall 2010

Michael Wiescher

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Research field: nuclear astrophysics, nuclear physics applications
Students

1. Adam Jerome Alongi
2. Mathew Duschl Anthony
3. Julie Ann Cass
4. Santina Michelle Consiglio
5. Cathryn Ann Gerbich
6. Mary Ellen Keneally
7. Jinil Kim
8. Giuseppe Passucci
9. Nancy Anne Therese Paul

Your plans and future goals?
Goals & Agenda

Preparation for a life as physicist

Job opportunities
- Academia,
- Government research
- Government agencies
- Industrial applications
- Energy industries
- Medical industry
- Software development
- Banking

[Pie chart showing job opportunities distribution: 31% Industry, 29% University Faculty, 10% Medical Physics, 10% Finance, 8% National Laboratories, 7% Government, 5% Research Assoc.]
Schedule

<table>
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<tr>
<th>Date</th>
<th>Lecture</th>
<th>Speaker</th>
<th>Institution</th>
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<tr>
<td>25-Aug-2010</td>
<td>Class Overview</td>
<td>Wiescher</td>
<td>Notre Dame</td>
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<tr>
<td>1-Sep-2010</td>
<td>Esteem and Marketing in Physics</td>
<td>Greg Crawford, Dean</td>
<td>Notre Dame</td>
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<td>8-Sep-2010</td>
<td>From Physics to Financial Engineering</td>
<td>Boris Skorodumov</td>
<td>Platts</td>
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<td>15-Sep-2010</td>
<td>Astrophysics at Optical and IR Wavelengths</td>
<td>Peter Garnavich</td>
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<td>22-Sep-2010</td>
<td>Accelerator Applications in Science and Industry</td>
<td>Ed Stech</td>
<td>Notre Dame</td>
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<td>29-Sep-2010</td>
<td>Future of/in Nuclear Physics</td>
<td>Michael Wiescher</td>
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<td>6-Oct-2010</td>
<td>Network Physics</td>
<td>Zoltan Toroczai</td>
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<td>20-Oct-2010</td>
<td>fall break</td>
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<td>27-Oct-2010</td>
<td>New Physics Research Opportunities at NIF</td>
<td>Dieter Schneider</td>
<td>Livermore Natl. Lab</td>
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<td>3-Nov-2010</td>
<td>A Physicists Life in Industry</td>
<td>Lissa Tegelman</td>
<td>DBA Isotope Products</td>
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<td>10-Nov-2010</td>
<td>The Role of Isotopes</td>
<td>Ani Aprahamian</td>
<td>Notre Dame</td>
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<td>17-Nov-2010</td>
<td>Perspectives in Climate Physics</td>
<td>Michael Wiescher</td>
<td>Notre Dame</td>
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<td>24-Nov-2010</td>
<td>Nuclear Safeguard and Homeland Security</td>
<td>Peter Santi</td>
<td>Los Alamos Natl. Lab</td>
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<td>1-Dec-2010</td>
<td>Opportunity of Graduate School</td>
<td>Kathie Newman</td>
<td>Notre Dame</td>
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<td>8-Dec-2010</td>
<td>Life as a Student Abroad</td>
<td>Elisabeth High</td>
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<td>15-Dec-2010</td>
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Ask as many questions as you can think of !!!!

1 page summary report on each external presentation!
Requirements & Expectations with respect to class presentations

- One page summary on each external presentation
- Evaluate content and quality
- Analyze in terms of future job opportunities

- Questions, questions, questions & discussions!
Final Project

http://sciencecareers.sciencemag.org/

http://www.aaas.org/spp/rd/rd09title.htm
Report instead of Final Exam

Write a <10 page summary on a recent National Academy, APS or AAAS report associated with present issues related to science and society!

Examples:
- Energy needs
- Homeland Security
- Medical Applications
- Basic Science Needs
- etc

Requirements:
- Identify physics issues
- Justify needs for physics training
- Identify job opportunities
- Evaluate societal impact
- Present personal interest analysis