International Dual Degree Programs

Transatlantic Master's Degree Program in Forest Resources

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Why International Graduate Education?

- **Student perspectives:**
  - Professional development re: global context of the work
- **Faculty perspectives:**
  - Enhanced collaboration among colleagues with different areas of expertise
- **Institution perspectives:**
  - Global partnerships; international presence
- **Field perspectives:**
  - Enhanced global / inter-cultural capacities among practitioners
What is the **Atlantis Program**?

- Funded under a joint US Dept. of Ed. and EU grant
- Exchange of NCSU and European Master's students, leading to dual (double) Master's degrees in Forestry

**Academic Partners**
- North Carolina State University (NCSU)
- Swedish University of Agricultural Sciences (SLU)
- University of Helsinki (UH)
Graduate Students

- 2 years of studies (4 semesters)
  - One semester at SLU in Sweden
  - One semester at UH in Finland
  - Two semesters at NCSU

- A wide range of classes are available (all in English)

- Students pay tuition and fees at home institution while studying abroad.
For a dual degree, students must comply with thesis requirements at both awarding universities. Students have joint supervision of the thesis work from NCSU and SLU or UH. The thesis is presented publicly at one of the universities; videoconferencing software has been used to have simultaneous presentations at the partner university. Students are strongly encouraged to adopt a comparative EU-US perspective in their Master theses. We help match appropriate academic advisors at the partner universities.
Benefits of Dual MS Degrees

- Graduates will be capable of coming up with innovative solutions for North American, European, and global forest resource and sustainability issues.

- Graduates will possess professional knowledge, language and intercultural communication skills invaluable for successful careers in international environments.

- Training at several different highly ranked forestry schools

- Mentoring from faculty in different countries
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<tr>
<th>Name</th>
<th>Nationality</th>
<th>Sem/Yr First enrolled at Home Institution</th>
<th>SLU, Sweden</th>
<th>UH, Finland</th>
<th>NCSU Degree Awarded</th>
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Consumption of the organic soil layer in southern Sweden during fire events and the correlation with the Canadian Forest Fire Weather Index (FWI) risk ratings – Blake Jordan (NCSU & SLU)

- In hemiboreal forests in southern Sweden, fire is the major natural disturbance:
  - Can be stand-replacing, partial, or create gap dynamics
- Use forest stand data to model stand transitions as a result of prescribed fire treatments
- Studying organic soil consumption characteristics and burn severity reveals smoldering fire attributes
- Framed to model the effects of prescribed fire and wildfire on forest management practices
Rainfall Interception by Urban Trees
Elina Inkilainen (UH & NCSU)

Trees reduce **stormwater runoff** by intercepting up to **40%** of rainfall in the tree canopy

- Which factors affect the process in the urban setting?
- Development of models and methods for urban areas
- How much rainfall does the urban forest of Raleigh intercept?
Other Atlantis MS Theses

- Developing a model for eco-labeling standards for the U.S. wood and paper products - Hanna-Lotta Heikkonen
- Effects of intensive silviculture in the restoration of Northeastern Atlantic Forests in Brazil - Aliisa Harjuniemi
- Choice of rate of return of forest owners in the SE US - Jaana Korhonen
- Economic assessment of stand-level treatments for southern pine beetle prevention in the SE US - Nate Naumann
- Developing forest bioenergy harvesting ratios to improve US Forest Service timber utilization predictions - Nate Osborne
- Optimal rotation period and its influence on carbon cycle, sequestration and storage - Rafal Chudy
- The Importance of Good Harvesting Residue Yield and Recovery Rates for Energy Policy Development – Arnis Jurevics
- Fluctuating Asymmetry in Birch in Northern Sweden – Kesi Stoneking
- Effect of retention trees on the growth & yield of Norway spruce – Annika Altmae
- Effects of Rectangularity on Growth Characteristics of Pinus contorta in Northern Sweden – Mark Brand
- And many more... all focused on Sustainable Natural Resource Solutions
What makes this program successful?

- **Students**
  - Motivated and very good students
  - Great thesis work & faculty co-supervisors
  - Quality and content of courses abroad

- **Strong partnerships** = We like to work together 😊
  - Faculty exchanges as well!
- **Active communication** between the partners
- **All departments** committed to the program
- **Help from the universities** with practical matters
Important Issues for Dual MS Degrees

- Initial establishment of dual degree
  - MOU’s
  - Student Exchange Agreements
  - Dual Degree Agreements
- Administration
- Application review and admission (2 levels)
- Logistical details
- Theses advisors
- Time to completion (2 years)
- Funding (university help needed!)
What’s next...

- Renewal of dual degree agreement (with some adjustments) with the University of Helsinki

- Adjustment of program with SLU in Sweden to move towards a student exchange agreement (not dual degree) due to a change in Swedish Law.
  - Student tuition and fees for non-EU citizens
  - Exchange will continue

- Continuation of faculty collaborations

- All of this equals a sustainable model for international programs, collaborations, and student exchange!!
Questions?

- More Info online: http://cnr.ncsu.edu/fer/atlantis/index.html
- Bronson_Bullock@ncsu.edu