

National Advanced Silviculture Program Region 9 Local Lake States Module

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ABSTRACT.—The National Advanced Silviculture Program (NASP) is composed of four national modules and one regional or local module. The University of Minnesota hosted the Lake States Regional Module in 2018. We implemented changes to how the program was offered, including broadening the participant pool and shifting the delivery method. Broadening the participation pool allowed for greater collaboration among agencies. The blended delivery method, half online and half in-person, reduced costs, reduced length of travel for participants, and made resources such as reports, documents, maps, more easily accessible in participants' offices. We utilized multiple methods of active learning during the online sessions and focused on field activities and field trips when meeting in person. Overall, participants gave high ratings to the 2018 offering both in terms of content and effective delivery.

KEY WORDS: silviculture, online teaching, active learning, continuing education, blended classroom

INTRODUCTION

The National Advanced Silviculture Program (NASP) is a national, graduate-level training required for USDA Forest Service personnel to become certified silviculturists. The curriculum includes three national modules, each 2 weeks long, and a fourth module that is 3 weeks long. The modules are as follows:

- Module 1: Ecological Systems
- Module 2: Inventory and Decision Support
- Module 3: Landscape Ecology
- Module 4: Advanced Silviculture Topics

In addition to the four national modules, students take an additional regional or local module, which delves deeper into important regional topics. In 2018, the University of Minnesota hosted the Lake States Regional Module (hereafter referred to as Regional Model) at the University of Minnesota, Cloquet Forest Center (CFC), Cloquet, MN. The Regional Module is generally hosted every other year; in 2018 students in this module were primarily from Michigan, Wisconsin, and Minnesota. The overarching goal of the Regional Module is to focus on silvicultural systems, ecosystem services (hydrology, soils, wildlife, etc.), and how to manage for multiple objectives for regionally important forest types. Specific objectives were (1) to synthesize content about silviculture, forest ecosystems, wildlife, and related fields for application to Lake States forests; (2) to focus on practical opportunities and programs to support implementation of creative, scientifically sound silviculture within individual agencies

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and across agencies; (3) to work through solutions to barriers and opportunities including markets, technology, operational issues, protecting site quality, and other factors specific to our region; and (4) to build relationships and learn how forestry practices are done in other organizations operating in the same region.

Recently, this module has focused on the Good Neighbor Authority (GNA), which allows the USDA Forest Service to enter into agreements with state forestry agencies to do the critical management work to keep our forests healthy and productive. This focus appeals to a diverse group of forest managers.

MODIFICATIONS TO THE MODULE IN 2018

Based on previous feedback and discussions, two large modifications were made to the Lake States Regional Module: broadening enrollment and shifting the delivery method. The Regional Module was advertised through the University of Minnesota's Sustainable Forests Education Cooperative (Coffin et al. 2001) as "Advanced Silviculture for the Lake States." Enrollment in the 2018 course included state, county, local, and other forest management agency employees, as well as USDA Forest Service personnel. There was no difference in the content offered to Forest Service and non-Forest Service participants, however, only Forest Service NASP students received grades for the course. By including other agencies, the goal was to foster relationships across ownership boundaries, bring diverse perspectives and experiences of forest management to the course, and provide a means for discussing common issues and management solutions related to forest management and silviculture in the Lake States region. Field trip experiences provided additional opportunities for agencies to share knowledge. The field experiences were hosted by county, private forest industry, academics, federal agencies, and nonprofit organizations and highlighted different opportunities and constraints.

One opportunity created by the expanded participant pool was to build interagency relationships and focus discussion on the GNA, which was discussed at the regional level by the Forest Service and at the local level by the Wisconsin Department of Natural Resources. Having students from within and outside the Federal system helped to build understanding of the opportunities and constraints of implementing collaborative projects.

The second modification to the module was the transition to a blended online and in-person format. The goals of the blended delivery method were to reduce cost, reduce time away from home, and increase the ability of participants to leverage key local resources, such as maps, stand data, and other documents, and projects students were already working on.

REVIEW WORK AND ONLINE CONTENT

Participants were assigned content to review prior to the start of the module. This included nine videos on foundational information (offered via YouTube at z.umn.edu/NASP-videos) and papers on regional research. Given the added diversity of the audience, this helped to ensure that all students entering the class had a similar level of basic knowledge. In addition to the content, all students were required to complete a technology check to ensure a working microphone and web camera prior to the start of class. Since our first meeting as a class was online, the module directors and students created self-recorded video introductions. These videos were 1 to 3 minutes long and included information on each participant's education, work history, and hobbies.

The online content was divided into six online modules and was offered 2 days a week for the 3 weeks prior to the in-person session. The online tools that we utilized were the Canvas Learning Management System, PollEverywhere live polling, Webex videoconference, and Google Drive and Forms. The six modules followed these broad themes:

- Day 1: Introductions and Silvicultural Systems
- Day 2: Climate Adaptation
- Day 3: Good Neighbor Authority and Silvics
- Day 4: Prescription Writing, Forest Health, and Lowland Forests
- Day 5: Silvics and Silviculture, Fisheries, and Adaptation
- Day 6: Soils, Hydrology, Wildlife, and Forest Management.

To maintain engagement during the online sessions, the short lectures were interspersed with small-group breakout discussions, independent and group activities, and written reflections.

IN-PERSON CONTENT

Since each day's online content focused on the more fundamental concepts and content-based lecture material (i.e., day 1 applied forest ecology and silviculture theory), the in-person time as a class was mostly spent in the field. Five of the six days consisted of field trips and active learning opportunities with state, county, Federal, and private land organizations to discuss silvicultural systems. Field trip leaders were specifically asked to give a background on stand condition and information such as site characteristics, as well as allow students time to "wander" and hypothesize reasons certain silvicultural decisions were made. This shifted field trip stops from a one-way flow of information to a more active and engaging environment between students and field trip leaders. The final day of class consisted of presentations on applying concepts from the class to a local issue of importance.

CONCLUSIONS

Overall, the blended Lake States Regional Module was rated highly in both content and delivery methods. Students were surprised by how engaging the online sessions were and provided positive feedback, especially from those enrolled in the full NASP program who particularly appreciated the reduced travel required to complete this module. We plan to continue offering the module in its blended format in the future and make continuous improvements.

LITERATURE CITED

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