



# STEPHEN F. AUSTIN STATE UNIVERSITY

**Arthur Temple College of Forestry and Agriculture**  
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## **FORS 3347-001: Silviculture, Fall 2023** **FORS 3047-020: Silviculture Lab, Fall 2023**

### **Course Details**

**Instructor:** Dr. Jeremy Stovall  
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Office: 214 Forestry

Phone: (936) 468-2127  
 Office Hours: By appointment

Generally, I maintain an open-door policy, and keep a schedule posted by my door. My desk is in the back room, so come on in if the door is open. Please feel free to stop by my office whenever. If you are coming to campus specifically to see me it would be best to make an appointment by email. I check email frequently and reply as soon as possible, within 24 hours M - F at most.

Class: 8:00am – 8:50am Tuesday and Thursday, Forestry Building 222  
 Lab: 2:00pm – 4:50pm Tuesday, Forestry Building 222

### **Course Description**

**FORS 3347. Silviculture** - 3 semester hours, 2 hours lecture and 3 hours lab per week. Study of silvicultural systems, regeneration and intermediate management from ecologic and economic viewpoints. Required field trips. Prerequisites: FORS 2305, FORS 2309, FORS 3110.

### **Program Learning Outcomes**

Forestry 3347 is one of the forestry core courses required of all forestry majors and thus competency is required. A minimum grade of a "C" must be attained or the course will have to be repeated. The course is designed to address the following Program Learning Outcomes, as given in the BSF Program Matrix:

1. Demonstrate understanding and competency of forest ecology and biology;
2. Demonstrate understanding and competency in the measurement of forest resources;
3. Demonstrate understanding and competency in managing forest resources;
4. Demonstrate understanding and competency of forest resource policy, economics, and administration.
5. Demonstrate understanding and competency in oral and written communication skills.

\*Items #1 - #4 above are required by the Society of American Foresters, the program's accrediting agency.

\*This is not a General Education Core Course

| B.S. Forestry Program Learning Outcomes: Proficiency Levels |                                      |  |  |   |  |
|---|--------------------------------------|--|--|---|--|
| Course  | PLO 1<br>Forest Ecology &<br>Biology | PLO 2<br>Forest<br>Resource<br>Measurement | PLO 3<br>Forest Resource<br>Management | PLO 4<br>Forest Resource Policy,<br>Economics, Administration | PLO 5<br>Oral & Written<br>Communication<br>Skills |
| FORS 3347   | A                                    | A  | A                                      | A   | A  |

**A** – Advanced – FORS 3347 supports Program Learning Outcome by providing students with transitional, high level topic-specific information, activities, and opportunities that enable the students to apply their critical thinking and tactical skills to resolve increasingly challenging strategic situations.

## Student Learning Outcomes

Upon the completion of this course, successful students will:

1. Demonstrate an understanding of stand dynamics, including concepts of stand structure, function, establishment, growth, composition, health, and quality (PLO 1).
2. Explain the ecological underpinnings and technical considerations for common regeneration, establishment, and intermediate treatments that comprise modern silvicultural systems (PLO 1, 2).
3. Develop data-driven, time- and space-bounded prescriptions for forest stands considering ecological, economic, and societal aspects of management decisions in an ethical context, including logical rationale supporting management decisions (PLO 1,2,3,4,5).
4. Create solutions to real-world forest management challenges by applying higher-order thinking skills to their knowledge of silviculture (PLO 1,2,3,4,5).

## Text and Materials

- Required: Ashton and Kelty **The Practice of Silviculture: Applied Forest Ecology**. 10<sup>th</sup> edition, 2018 (ISBN: 9781119271307); either the eTextbook or paperback formats are acceptable
- Required: Texas Forestry Association & Texas Forest Service. **Texas Forestry Best Management Practices** (2017) Available freely online or as an app, google "Texas Forestry BMP".
- Recommended: Eyre. **Forest Cover Types of the US and Canada** (SAF 1980)
- Recommended: Oliver & Larson. **Forest Stand Dynamics**. Update edition, 1996 (ISBN: 0471138339). Free PDF version available at [https://elischolar.library.yale.edu/fes\\_pubs/1/](https://elischolar.library.yale.edu/fes_pubs/1/)
- A hard hat (per college policy).
- Appropriate clothing and boots for the field.
- A clip board for taking notes in the field.
- A calculator.

## Course Website

Reading quizzes, lectures, course documents, and grades will all be available on the silviculture course website, which can be found at: [www.SFAsilviculture.com](http://www.SFAsilviculture.com).

## Course Requirements

**Quizzes:** Quizzes will typically be given at the beginning (8:00 am) of regularly scheduled lecture times. On average there will be one quiz per week, but it will vary between Tuesday and Thursday lecture sessions. Some weeks there may be two quizzes, and some weeks there may be no quizzes. Quizzes will be closed book and note, timed, and an individual effort. Following the quiz, we will go over any questions you might have. Quizzes will be graded and returned to you by the next class session.

Quizzes will follow a similar format each week:

- Two questions will cover terminology from the Silviculture Terminology List. Definitions do not need to be verbatim, but they do need to contain all the major components of the definition. The exception to this rule is the definition of the term 'silviculture', which must be verbatim.
- One short answer question will cover concepts from previous lectures, typically focusing on more recent material. However, by its nature the course is cumulative.
- One short answer question will cover concepts from the assigned readings for that day. See the course schedule; if a quiz is given, the reading question will be drawn from the reading listed on

that same line for that day. This question will not require you to memorize every detail of the readings, but will focus on general concepts of the reading that you will not be able to guess if you have not completed the reading.

- One question will cover quantitative concepts (math!) we are learning, and will be cumulative throughout the course. Example problems are available on the course website, along with video solutions. **Be sure to bring a calculator to each quiz.**
- One bonus question from any one of the above categories.

Each question is worth two points, so while each quiz is worth 10 points, there are 12 possible points. Partial credit may be awarded on each question. If you miss a quiz due to an excused absence or tardiness which you have informed me of *prior* to class, your grade will be recorded as an E for excused, which will not affect your overall course grade. If you miss a quiz due to an unexcused absence, or are late to class without prior approval, you will not be able to take the quiz and will earn a 0. Typically, no makeup quizzes will be given. No quizzes will be dropped. During the final exam period a ‘big quiz’ will be given worth 4 individual quizzes. No reading questions will be included on the ‘big quiz’, and questions will be divided as 50% terms, 25% short answer, and 25% quantitative categories.

If you require additional time or other accommodations, please work with disability services and the instructor at the beginning of the semester. This may require you to come in early or before class to take quizzes, but I will be available as needed.

**Lab Exercises:** Lab exercises will mostly entail prescription writing, and will be completed in the field during the lab period. Some exercises will be completed individually, while some will be completed in groups. **Bring your useful handouts packet and a calculator to each lab.** Hardhats will be worn at all times that you are beneath tree-cover. Appropriate clothing, including pants and boots, is required for the labs. Some labs on bottomland sites may require wading. If you are inappropriately dressed you will be sent home or back to the vans and will receive a zero for that lab’s assignments unless you can rectify your attire before lab is over (see attendance policy below). It is at the discretion of the instructor what appropriate dress for the field is. Please do not wear sandals, tennis-shoes, sneakers, crocs, flip-flops, slippers, etc. You may also require a jacket or rain gear in the winter and drinking water during warm weather, as appropriate. Your lab will meet every week as scheduled. If we are scheduled to go to the field, then we will go, regardless of weather conditions. Come to lab appropriately dressed. Tobacco products and vaping are not permitted in lab.

**Grading Policy**

| Item                | Percentage  | Percent Grade  | Letter Grade |
|---------------------|-------------|----------------|--------------|
| Quizzes             | 50%         | >89.44%        | A            |
| Lab Exercises       | 50%         | 89.44 – 79.45% | B            |
| <b>COURSE GRADE</b> | <b>100%</b> | 79.44 – 69.45% | C            |
|                     |             | 69.44 – 59.45% | D            |
|                     |             | <59.45%        | F            |

Grades will be made available on the course website throughout the semester. Final grades or individual assignments may be curved if deemed appropriate by the instructor. Applying a curve will not result in the lowering of any student’s grade. Additionally, bonus opportunities are offered to the entire class and will be evaluated for credit at the discretion of the instructor. A list of bonus opportunities is available on the course website. Each bonus point is worth 0.2 points on one quiz, thus 50 bonus points is worth a 10/10 on a quiz. It is strongly recommended that all students complete as many bonus opportunities as possible to improve their understanding of silviculture. Bonuses may be submitted any

time during the semester, but no later than the beginning of the final regularly scheduled lecture period. A grade of 0 will be given to all involved parties on any lab or quiz on which cheating occurs. A second instance of any type of involvement in cheating by any individual will result in an F in the course.

### **Attendance Policy**

Attendance is important to successfully achieve the student learning outcomes described above. Attendance will be taken within the first 5 minutes of all classroom and lab sessions. An unexcused lab absence will result in a grade of zero for any assignments missed. Please make every effort to attend all labs. It is university policy to excuse students from attendance for certain reasons. Among these are absences related to health, family emergencies and student participation in university-sponsored events. Students are responsible for providing documentation satisfactory to the instructor for each class missed prior to the absence. Class session attendance is mandatory, and unexcused absences may result in lowered grades on individual assignments.

### **Code of Student Conduct and Academic Integrity Policy (10.4)**

[The Code of Student Conduct and Academic Integrity](#) outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy. Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one's self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities. Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one's own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one's own academic work being offered for credit or in conjunction with a program course or degree requirements. Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam. Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

### **Course Grades Policy (5.5)**

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. Please read the complete policy at <https://www.sfasu.edu/docs/policies/5.5.pdf>

### **Academic Accommodation for Students with Disabilities Policy (6.1)**

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to <http://www.sfasu.edu/disabilityservices/>

### **Acceptable Student Behavior**

Classroom behavior should not interfere with the instructor's ability to conduct the class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom.

| <b>SILVICULTURE TENTATIVE SCHEDULE****</b> |        |     |  |                                      |   |
|--|--------|-----|--|--------------------------------------|---|
| WEEK                                       | DATE   | DAY | LECTURE  | READING ASSIGNMENT                   | LAB                                       |
| 1  | 29-Aug | Tue | <a href="#">1 Introduction to Silvicultural Systems</a>            | <a href="#">OT* 1.1 – 1.3</a>        | <a href="#">Intro to Silviculture</a>     |
|  | 31-Aug | Thu | <a href="#">2 Stand Dynamics I: Review</a>                         | <a href="#">PS**: 63-79 (chpt 4)</a> |   |
| 2  | 5-Sep  | Tue | <a href="#">3 Stand Dynamics II: Ecophys &amp; Silviculture</a>    | <a href="#">OT 2.4</a>               | <a href="#">Stand Delineation</a>         |
|  | 7-Sep  | Thu | <a href="#">4 Methods of Regeneration: Introduction</a>            | <a href="#">OT 3.1</a>               |   |
| 3  | 12-Sep | Tue | <a href="#">5 Methods of Regen: Even Aged – Clearcut</a>           | <a href="#">OT 3.2</a>               | <a href="#">Prescriptions</a>             |
|  | 14-Sep | Thu | <a href="#">6 Methods of Regen: Even Aged – Seed-tree</a>          | <a href="#">OT 3.3</a>               |   |
| 4  | 19-Sep | Tue | <a href="#">7 Methods of Regen: Even Aged – Shelterwood</a>        | <a href="#">OT 3.4</a>               | <a href="#">Pine Plantations</a>          |
|  | 21-Sep | Thu | <a href="#">8 Methods of Regen: Two Aged Methods</a>               | <a href="#">OT 3.5</a>               |   |
| 5  | 26-Sep | Tue | <a href="#">9 Methods of Regen: Uneven Aged Methods</a>            | PS 272-302 (chpt 13)                 | <a href="#">PTAEDA Modeling</a>           |
|  | 28-Sep | Thu | <a href="#">10 Methods of Regen: Regulation Methods</a>            | <a href="#">Guldin Paper***</a>      |   |
| 6  | 3-Oct  | Tue | <a href="#">11 Stand Establishment: Natural Regen</a>              | PS: 80-116 (chpt 5)                  | <a href="#">Natural Pine Silviculture</a> |
|  | 5-Oct  | Thu | <a href="#">12 Stand Establishment: Site Prep</a>                  | PS: 137-168 (chpt 7)                 |   |
| 7  | 10-Oct | Tue | <a href="#">13 Stand Establishment: Competition Control</a>        | PS: 403-423 (chpt 18)                | <a href="#">Regen Surveys</a>             |
|  | 12-Oct | Thu | <a href="#">14 Stand Establishment – Tree Improvement</a>          | PS: 305-321 (chpt 14)                |   |
| 8  | 17-Oct | Tue | <a href="#">15 Stand Establishment – Nurseries &amp; Seedlings</a> | PS 322-349 (chpt 15)                 | <a href="#">Herbicide Application</a>     |
|  | 19-Oct | Thu | <a href="#">16 Stand Establishment: Planting</a>                   | PS: 350–377 (chpt 16)                |   |
| 9  | 24-Oct | Tue | <b>NO CLASSES OR LABS, SAF NATIONAL CONVENTION</b>                 |                                      |   |
|  | 26-Oct | Thu |  |                                      |   |
| 10   | 31-Oct | Tue | <a href="#">17 Intermediate Trtmts: Thinning Methods</a>           | PS: 461-485 (chpt 21)                | <a href="#">Site Prep &amp; Planting</a>  |
|  | 2-Nov  | Thu | <a href="#">18 Intermediate Trtmts: Stand Density 1</a>            | PS: 486-505 (chpt 22)                |   |
| 11   | 7-Nov  | Tue | <a href="#">19 Intermediate Trtmts: Stand Density 2</a>            | <a href="#">Johnson Paper</a>        | <a href="#">Quantitative Silviculture</a> |
|  | 9-Nov  | Thu | <a href="#">20 Intermediate Trtmts: Forest Nutrition 1</a>         | <a href="#">Fox: Development</a>     |   |
| 12   | 14-Nov | Tue | <a href="#">21 Intermediate Trtmts: Forest Nutrition 2</a>         | <a href="#">Fox: Tree Nutrition</a>  | <a href="#">Hardwood Classification</a>   |
|  | 16-Nov | Thu | <a href="#">22 Silvicultural Systems: Hardwoods 1</a>              | <a href="#">Hodges Paper</a>         |   |
| 13   | 21-Nov | Tue | <b>NO CLASSES OR LABS, THANKSGIVING</b>                            |                                      |   |
|  | 23-Nov | Thu |  |                                      |   |
| 14   | 28-Nov | Tue | <a href="#">23 Silvicultural Systems: Hardwoods 2</a>              | <a href="#">Meadows Paper</a>        | <a href="#">Hardwood Silviculture</a>     |
|  | 30-Nov | Thu | <a href="#">24 Silvicultural Systems: BMPs &amp; Certification</a> | PS: 509-533 (chpt 23)                |   |
| 15   | 5-Dec  | Tue | <a href="#">25 Silvicultural Systems: Timber Management</a>        | PS: 597-617 (chpt 26)                | Lab Makeup Slot                           |
|  | 7-Dec  | Thu | <a href="#">26 Silvicultural Systems: Longleaf Pine</a>            | <a href="#">Franklin Paper</a>       |   |
| 16   | 12-Dec | Thu | <b>BIG QUIZ 8:00 – 10:00am</b>                                     | Study                                | <b>NO LAB</b>                             |

\* OT = Online Textbook freely available on the SFA silviculture website  
 \*\* PS = Practice of Silviculture (Ashton & Kelty)  
 \*\*\* Readings not in PS are currently available on the course website in the course documents section.  
 \*\*\*\*This schedule is subject to change. However, I will notify you via email as soon as possible of any changes.

**PASSWORD FOR READINGS:** \_\_\_\_\_

## Student Wellness and Well-Being

SFA values students' overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students' mental health and wellness. Many of these resources are free, and all of them are confidential.

### On-campus Resources:

The Dean of Students Office  
Rusk Building, 3rd floor lobby  
[www.sfasu.edu/deanofstudents](http://www.sfasu.edu/deanofstudents)  
936.468.7249  
[mdos@sfasu.edu](mailto:mdos@sfasu.edu)

SFA Human Services Counseling Clinic  
Human Services, Room 202  
[www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)  
936.468.1041

The Health and Wellness Hub "The Hub"  
Location: corner of E. College and Raguet St.  
[www.sfasu.edu/thehub](http://www.sfasu.edu/thehub)  
936.468.4008  
[thehub@sfasu.edu](mailto:thehub@sfasu.edu)

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include: Health Services, Counseling Services, Student Outreach and Support, Food Pantry, Wellness Coaching, Alcohol and Other Drug Education

### Crisis Resources:

- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- johCrisis Text Line: Text HELLO to 741-741