



BSC/AG 463 LANDSCAPE ECOLOGY

COURSE SYLLABUS: FALL 2025

INSTRUCTOR INFORMATION

Instructor: Walter Paulin Tapondjou Nkonmeneck

Office Location: Science Building (STC) 208

Office Hours: MWF 9:30-10:30 AM (By appointment, meeting either via Zoom link or in person)

Office Phone:

Office Fax:

University Email Address: Walter.Tapondjou@etamu.edu

Preferred Form of Communication: **email**

Communication Response Time: less than 48hr

COURSE INFORMATION

Textbooks:

Required: Turner, M.G. and Gardner, R.H. 2015. Landscape Ecology in Theory and Practice: Patterns and Process. 2nd edition. Springer Business and Media LLC, New York, USA. ISBN 978-1-4939-2793-7 ISBN 978-1-4939-2794-4 (eBook), DOI 10.1007/978-1-4939-2794-4

Additional Texts and/or Materials: A selection of readings from the primary scientific literature will accompany readings from the textbook in some weeks. Discussion Reading List (Alpha-order):

- Béliveau, M., D. Germain, A.-N. Ianăş. 2017. Fifty-year spatio-temporal analysis of landscape changes in the Mont Saint-Hilaire UNESCO Biosphere Reserve. *Environmental Monitoring and Assessment* 189, 215.
- Bowker, M.A., F.T. Maestre, D. Eldridge, J. Belnap, A. Castillo-Monroy, C. Escolar and S. Soliveres. 2014. Biological soil crusts (biocrusts) as a model system in community, landscape and ecosystem ecology. *Biodiversity and Conservation* 23:1619-1637
- Egberth, M., G. Nyberg, E. Næsset, T. Gobakken, E. Mauya, R. Malimbwi, J. Katani, N. Chamuya, G. Bulenga, H. Olsson. 2017. Combining airborne laser

The syllabus/schedule are subject to change.

scanning and Landsat data for statistical modeling of soil carbon and tree biomass in Tanzanian Miombo woodlands. *Carbon Balance and Management* 12:8 DOI 10.1186/s13021-017-0076-y

- Hanan, E.J., M.S. Ross, P.L. Ruiz, J.P. Sah. 2010. Multi-scaled grassland-woody plant dynamics in the heterogeneous marl prairies of the Southern Everglades. *Ecosystems* 13: 1256-1274.
- Hitt, S., S.J. Pittman, R.S. Nemeth. 2011. Diel movements of fishes linked to benthic seascape structure in a Caribbean coral reef ecosystem. *Marine Ecology Progress Series* 427: 275-291.
- Le Roux, M., M. Redon, F. Archaux, J. Long, S. Vincent and S. Luque. 2017. Conservation planning with spatially explicit models: a case for horseshoe bats in complex mountain landscapes. *Landscape Ecology* 35: 1005-1021.
- Li, H. and Wu, J. 2004. Use and misuse of landscape indices. *Landscape Ecology* 19(4): 389-399.
- Pickard, B.R., D. Van Berkel, A. Petrasova and R.K. Meentemeyer. 2017. Forecasts of urbanization scenarios reveal trade-offs between landscape change and ecosystem services. *Landscape Ecology* 32: 617-634.
- Pijanowski, B.C., A. Farina, S.H. Gage, S.L. Dumyahn and B.L. Krause. 2011. What is soundscape ecology? An introduction and overview of an emerging new science. *Landscape Ecology* 26: 1213-1232.
- Romme, W.H., M.S. Boyce, R. Gresswell, E.H. Merrill, G.W. Minshall, C. Whitlock and M.G. Turner. 2011. Twenty years after the 1988 Yellowstone fires: lessons about disturbance and ecosystems. *Ecosystems* 14: 1196-1215.
- San-Miguel, I., D.W. Anderson and N.C. Coops. 2017. Characterizing historical fire patterns as a guide for harvesting planning using landscape metrics derived from long term satellite imagery. *Forest Ecology and Management* 399: 155-165.
- Turner M.G. 2005. Landscape ecology in North America: past, present and future. *Ecology* 86:1967-1974.
- Wiens, J.A. 1989. Spatial scaling in ecology. *Functional Ecology* 3: 385-397.
- Wiens, J.A. and B.T. Milne. 1989. Scaling of 'landscapes' in landscape ecology, or, landscape ecology from a beetle's perspective. *Landscape Ecology* 3:87-96
- Wiens, J.A. 2009. Landscape ecology as a foundation for sustainable conservation. *Landscape Ecology* 24: 1053-1065.
- Wu, J. and R. Hobbs. 2002. Key issues and research priorities in landscape ecology: an idiosyncratic synthesis. *Landscape Ecology* 17: 355-365.
- Yuan, F., Wu, J., Li, A., Rowe, H., Bai, Y., Huang, J., and Han X. 2015. Spatial patterns of soil nutrients, plant diversity, and aboveground biomass in the Inner Mongolia grassland: before and after a biodiversity removal experiment. *Landscape Ecology* 30: 1737-1750.

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Course Description

Students will gain a comprehensive understanding of landscape ecology, encompassing its main theories and significant developments. They will acquire skills in quantifying landscape patterns and analyzing the relationships between spatial patterns and processes. Moreover, they will become familiar with the practical applications of landscape ecology theory in research.

Student Learning Outcomes (Should be measurable; observable; use action verbs)

1. Understand the concepts and consequences of scale, scaling techniques, and spatial pattern.
2. Explain how ecological systems are dynamic in space and time.
3. Infer the abiotic and biotic processes that structure landscape mosaics and patterns of biodiversity at multiple spatial scales.
4. Review the theory, methodology, and application of landscape ecology to contemporary issues in conservation biology and resource management.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

- Proficiency in using the D2L Brightspace Learning Management System through myLeo Online.
- Proficiency in the use of Microsoft Word, and PowerPoint.
- Other relevant skills in using GPS, QGIS and Google Maps.

Instructional Methods

The course will meet in person on Mondays, Wednesdays, and Fridays. On Mondays and Tuesdays, you will be required to read the book chapters, supplemental reading material, and instructional PowerPoint slides. On Fridays, there will be a paper discussion. Exams will cover the material presented to you via myLEO Online and information in the text. I will post announcements on the course homepage to remind students of important due dates, in addition to announcing them in class. Students can monitor their progress in the course on the course webpage in D2L Brightspace.

Student Responsibilities or Tips for Success in the Course

- Attend all classes
- Dedicated study time each week to go over the materials covered in the class and the information in the relevant book chapter(s).
- Regularly checking both myLEO Online (D2L Brightspace) and emails for course-related announcements.

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- Actively participate by asking questions in class/office hours
- Completing assignments on time. Late assignments will be penalized.

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100% B = 80%-89% C = 70%-79% D = 60%-69% F = 59% or Below

Assessments

Discussions

As a class, we will delve into peer-reviewed literature that serves as a reinforcement and expansion of the key concepts presented in our lectures. These class discussions aim to foster critical thinking among students, enabling them to formulate questions, provide explanations, and effectively communicate their insights to their peers. Participation in these discussions is mandatory for all students. To ensure an inclusive learning environment, we will organize discussions where each student has the opportunity to lead a discussion. Additionally, a short writing assignment will be associated with each article, providing students with an opportunity to further explore and articulate their understanding of the research study. There will be nine writing assignments, the lowest grade will be dropped.

- **Discussion leading grade:** The ability of the student to lead a discussion will be evaluated based on preparation, facilitation, engagement with participants, and control of the discussion's flow and focus.

Exams

There will be a total of three exams, including the final exam. The final exam will be comprehensive regarding the concepts covered in the course but will focus on the material covered during the last section of the course. Exam questions will be based on lectures and readings. Exams will primarily include definition, short essay, and problem-solving questions. The best study guide for the exams will be your own class notes. If you miss an exam, it is your responsibility to contact me regarding the possibility and policy of a make-up; these will be addressed on a case-by-case basis.

Assessments

You will be assessed based on the grades from the discussion writing assignments 8 (33%), Discussion leading (8%), two exams (33%), and cumulative final exam (25%). Below is a breakdown of potential grades that can be earned in the class:

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<i>Assignment</i>	Max point	Times	Points	% of final grade
<i>Exams</i>	100	2	200	33%
<i>Writing assignments</i>	25	8	200	33%
<i>Research paper leading</i>	50	1	50	8%
<i>Final Exam</i>	150	1	150	25%
<i>Total</i>			600	

Make-up policy

Make-up will only be given if arrangements are made with the instructor before missing the scheduled quiz. A documented excuse will be required. Otherwise, missing assignments will be counted as zeroes in the overall grade computation.

Course Outline/Calendar

Tentative Course schedule: *(adjustments may be made later at instructor's discretion)

Week	Date	Topic	Heads up	Paper discussion
1	25-Aug	Welcome/Introduction, Course overview and expectations	Student survey 1st day of class	
	27-Aug	Introduction to Landscape Ecology and Scale		
	29-Aug	Introduction to Landscape Ecology and Scale		
2	1-Sep	Labor Day		
	3-Sep	Causes of Landscape Pattern		
	5-Sep	Causes of Landscape Pattern		
3	8-Sep	Introduction to Models		
	10-Sep	Introduction to Models		
	12-Sep	<i>Paper discussion I</i>	Instructor led	
4	15-Sep	Introduction to Models		
	17-Sep	Landscape Metrics		
	19-Sep	<i>Paper discussion II</i>	Student led	
5	22-Sep	Landscape Metrics		
	24-Sep	Landscape Metrics		
	26-Sep	Exam I		
6	29-Sep	Remote sensing & GIS		
	1-Oct	Remote sensing & GIS		

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	3-Oct	<i>Paper discussion III</i>	Student led	
7	6-Oct	Spatial Statistics		
	8-Oct	Spatial Statistics		
	10-Oct	<i>Paper discussion IV</i>	Student led	
8	13-Oct	Landscape Disturbance Dynamics		
	15-Oct	Landscape Disturbance Dynamics		
	17-Oct	<i>Paper discussion V</i>	Student led	
9	20-Oct	Organisms and Landscape Pattern		
	22-Oct	Organisms and Landscape Pattern		
	24-Oct	<i>Paper discussion VI</i>	Student led	
10	27-Oct	Organisms and Landscape Pattern		
	29-Oct	Organisms and Landscape Pattern		
	31-Oct	Exam II		
11	3-Nov	Ecosystem Processes in Heterogeneous Landscapes		
	5-Nov	Ecosystem Processes in Heterogeneous Landscapes		
	7-Nov	<i>Paper discussion VII</i>	Student led	
12	10-Nov	Ecosystem Processes in Heterogeneous Landscapes		
	12-Nov	Landscape Dynamics in a Rapidly Changing World		
	14-Nov	<i>Paper discussion VIII</i>	Student led	
13	17-Nov	Landscape Dynamics in a Rapidly Changing World		
	19-Nov	Landscape Dynamics in a Rapidly Changing World		
	21-Nov	<i>Paper discussion IX</i>	Student led	
14	24-Nov	Conclusions and Future Directions		
	26-Nov	No class		
	28-Nov	Thanksgiving break		

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15	1-Dec	Conclusions and Future Directions		
	3-Dec	Final Exam Review		
	6th-12th Dec	Final Exam		

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

The syllabus/schedule are subject to change.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

STUDENT RESPONSIBILITIES FOR COURSE

CWID and Password

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Technology-Related Issues

Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

TECHNOLOGY REQUIREMENTS AND SUPPORT

Minimal Technical Skills Needed

Students will need reliable computer and internet access for this course. Students must be able to effectively use myLeo email, myLeo Online D2L, and Microsoft Office.

Learning Management System (LMS) – D2L

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are the technical requirements:

- View the [Learning Management System Requirements Webpage](#).
- Learn more on the [LMS Browser Support Webpage](#).

Technical Support

The syllabus/schedule are subject to change.

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found on the [Brightspace Support Webpage](#).

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

If you have any questions or are having difficulties with the course material, please contact your instructor. Correspondence will always be through university email (your “myLeo” mail) and announcements in myLeo online (D2L). You will not RECEIVE email through D2L, so be sure to check your ETAMU email for communication. Students are encouraged to check university email daily.

Include the Following in Emails with Instructor:

- Course name and subject in the subject line
 - Salutation (Good afternoon, Dr. Jackson)
 - Proper email etiquette (no “text” emails – use proper grammar and punctuation)
 - Student name and CWID after the body of the email (possibly add to student signature on email)
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COURSE AND UNIVERSITY PROCEDURES/POLICIES

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The [Code of Student Conduct](#) is described in detail online in the [Student Guidebook](#).

Students should also consult the [Rules of Netiquette Webpage](#) for more information regarding how to interact with students in an online forum.

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ETAMU Attendance

For more information about the attendance policy, please view the [Attendance Webpage](#) and the [Class Attendance Policy](#)

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty University Procedure 13.99.99.R0.03](#)

[Undergraduate Student Academic Dishonesty Form](#)

[Graduate Student Academic Dishonesty University Procedure 13.99.99.R0.10](#)

[Graduate Student Academic Dishonesty Form](#)

Use of Artificial Intelligence

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

The syllabus/schedule are subject to change.

Office of Student Disability Resources and Services

East Texas A&M University

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@etamu.edu

Website: [Office of Student Disability Services](#)

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M University campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

East Texas A&M Supports Students' Mental Health – Counseling Services

The Counseling Center at East Texas A&M University, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

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Mental Health and Well-Being

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.



As an Institutional Member of the National Association of Schools of Music, East Texas State A&M University supports the Association's commitment to student health and wellness. The following web address provides links to information for resources related to physical and mental well-being, as well as assists in offering preventative measures that students can take to avoid serious and/or chronic conditions: [Musician Health and Safety - East Texas A&M University](#)

Department and Accrediting Agency Statements:

School of Music Mission Statement:

The School of Music at East Texas A&M University promotes excellence in music through the rigorous study of music history, literature, theory, composition, pedagogy, and the preparation of music performance in applied study and ensembles to meet the highest standards of aesthetic expression.

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