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ST 542-601 Course Syllabus

Statistical Practice

Spring 2026

Instructor Information

Name	Office Phone	Mobile Phone	Email	Office Location
Dr. Dan Harris	919-515-1924		doharris@ncsu.edu	SAS 4264
Kyle McKee (TA)			kjmckee@ncsu.edu	

Dan Harris

Office Hours

Dr. Harris: Fridays from 10:30-11:30 either in-person (SAS 4264) or via Zoom link, or by appointment (please request an appointment via email, with the understanding I will respond within one business day).   **Kyle McKee (TA):** Time TBD either in-person (SAS 1101) or via Zoom link.

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Preferred Method of Communication & Response Time

- **Preferred method of communication:** If you need to contact me directly, my preferred method of communication is email. You can expect to receive a response within one business day (i.e. not over the weekend). If I email you directly, please strive to respond within one business day. It is recommended that you check your NC State email at least once a day to stay on top of course communications.

- **Asking questions about the course:** If you have a question about the course or its content, you can email me or post your question on the Student Discussion Forum in Moodle. You can expect to receive a response within one business day (i.e. not over the weekend).

- **Email guidelines:** Always include a descriptive, specific, but concise subject. Please provide adequate context for your question in order to ensure I fully understand your email. Be sure to use your NC State email account.

Course Information

Course Website: ST 542 Moodle Site

Course Credit Hours: 3

Catalog Description

This course will provide a discussion-based introduction to statistical practice geared towards students in the final semester of their Master of Statistics degree. Note: the course will be offered online.

Structure

This course is delivered in a **hybrid** format, meaning it has asynchronous and synchronous components. Asynchronous components -- learning materials, activities, assignments, and assessments -- are delivered through **Moodle**, a secure and easy-to-use online learning platform. There will be some live sessions held via Zoom. While attendance is highly recommended, the sessions will be recorded for those who are unable to attend.

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This class has weekly material as well as a data analysis project that lasts through the semester. Each week, there are three sets of activities:

1. Weekly Material: This is where we cover the topic(s) for the week. There is typically a forum to discuss the weekly topic and occasionally a homework assignment to go with the topic. There are also readings for you each week.

2. Data analysis project steps: The semester-long data analysis project is broken into weekly steps. There are often forums here to discuss your progress. This is also where you will submit your presentations and written reports.

3. Focus on Communication: One of the goals of this class is to help you polish your statistical communication abilities. In this section, we will have an exercise from the textbook or other source and a forum to discuss that exercise.

Instructions for completing the forum are given in each forum. Most of the time, you must post at least three constructive comments. This can be one discussion post and two replies to other posts, or just three constructive replies to other posts. Forums are evaluated based on participation as well as professionalism. The forums should be completed within the week that the material is posted. Please do not try to work too far ahead or behind.

Meeting Time and Tool Used

This course will have some live sessions held via Zoom on Monday evenings from 6:30-7:30pm ET. You will be notified a week in advance when these sessions are to be held. They will be recorded for those who are unable to attend.

Prerequisites/Corequisites

[ST 512 or ST 514 or ST 516 or ST 518] and [ST 502 or ST 522 or ST 702]

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Minimum Technical and Digital Information Literacy Skills

Required technical Skills:

- Navigate and use Moodle, NC State's Learning Management System.
- Use Gmail, including attaching files to email messages.
- Create and submit files in commonly used formats (MS Word, Google Docs, pdf's).
- Download and install software as needed (see section on required software).
- Download and upload attachments.
- Use the Zoom web conferencing tool.
- Post to discussion boards and forums.

Required digital information literacy skills:

- Perform online research using various search engines and library databases. Visit NC State University Libraries.

- Use online search tools for specific academic purposes, including the use of search criteria, keywords and filters.

- Analyze digital information for credibility, currency, and bias (e.g... disinformation, misinformation).

- Properly cite information sources.

- Prepare a presentation on research findings.

Artificial Intelligence

In this course, students are encouraged to explore and utilize generative AI tools, such as chatbots, text generators, paraphrasers, etc., as part of their learning and coursework. These tools can be valuable for brainstorming, drafting, and enhancing your understanding of the material. However, it is important to critically assess and cite any AI-generated content used in your assignments and projects. Students are expected to demonstrate their own understanding and critical thinking in their final submissions. Proper attribution and transparency about your usage of an AI tool are expected.

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Students may use AI tools as a "thinking partner" and editor throughout the course to strengthen both their consulting work and communication. For example, they can use AI to (1) brainstorm clarifying questions for a client meeting, draft an agenda, and convert a vague project description into a concrete scope statement with assumptions, risks, and next steps; (2) revise technical writing for clarity and audience (e.g., turning a dense methods paragraph into an executive-summary version, tightening slide text, or checking tone in client emails); (3) support data work by generating starter R/Python code snippets for data cleaning and visualization, suggesting checks for common data-quality issues, and proposing alternative plots that better match the research question; and (4) accelerate reflection and idea generation by summarizing meeting notes into action items, proposing hypotheses or follow-on research questions from early analyses, and creating rehearsal prompts for presentations (including anticipated audience questions). In all cases, students should treat AI output as a draft—verifying code, calculations, and claims; citing or documenting any AI assistance when required; and ensuring the final deliverables reflect their team's judgment and the client's context.

General Education Program (GEP) Information

GEP Category Fulfilled

None

GEP Corequisites

None

Learning Outcomes

Students will practice writing and presenting throughout the semester, gaining soft skills that aren't necessarily covered in their other courses. Students will work in groups on consulting projects provided by the instructor. Students in this course will select projects from a list of projects that were submitted by researchers on campus. All feedback will be provided by the professor, the TA, and peers in the class. Covered topics will include negotiating expectations with clients, technical writing and editing, data cleaning and visualization, and finding research ideas from consulting projects.

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Course Materials

Required textbook

Becoming an Academic Writer - Goodson, Patricia Edition: 2nd ISBN: 9781483376257 Cost: softcover: $45 new , ebook: $28 to rent

Other required materials

None

Technology Requirements

NC State University Libraries offers [Technology Lending](#), where many devices are available to borrow for a 7-day period. [Computer labs](#) are available in various locations around campus for student use.

Computer

A laptop computer is [required/recommended] for students taking this course. NC State's Office of Information Technology provides recommendations for [your computer at NC State](#).

Software and digitally-hosted course components

You will be required to perform data analysis, generated written reports, and presentation materials as a part of this course. There are no specified tools required to perform these tasks, but it is recommended that you take advantage of tools that are either open source or part of NC State's enterprise tools. See [information about their purpose, how to access them, accessibility information, and privacy policies](#).

Other Student Expenses

- None

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Communication Guidelines

Respecting our learning community

The [NC State Code of Student Conduct](#) outlines expectations for behavior in the classroom (whether virtual or physical) and the consequences for students who violate these expectations. Any behavior that impacts other students' ability to learn and succeed will be addressed but expressing diverse viewpoints and interpretations of course content is welcome.

Community guidelines for this course include:

- Use a respectful tone in all forms of communication (email, written, oral, visual).
- Maintain professionalism (avoid slang, poor grammar, etc.) in your written communication.
- Respect regional dialects and culturally embedded ways of oral communication.
- Stay home or in your dorm room if you are exhibiting symptoms of a contagious illness (fever, chills, etc.).
- Enter our virtual and/or physical classroom community respectfully by refraining from lewd or indecent speech or behavior, helping to maintain a safe physical environment, not using your cell phone for voice or text communication except when explicitly given leave to do so, and not attending class under the influence of any substance.
- Treat each community member with respect by not recording others without their consent or engaging in any form of hazing, harassment, intimidation, or abuse.
- Respect cultural differences that may influence communication styles and needs.]

Plan for interaction between instructors and students

Regular communication will be as follows:

- The instructor will post an overview of activities for the coming week no later than Monday morning of each week that will appear in the Announcements section of the Moodle site and be transmitted to all students via email.
- The TA will provide feedback on assignments approximately one week after they are submitted.

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- The instructor and TA will hold weekly drop-in office hours that will be accessible both in person or via Zoom.

Policies regarding other communications:

- The instructor or TA will inform students of any changes in assignment dates, exam schedules or other important information via posts in the Announcements section of Moodle, which will also be relayed via email.
- The instructor or TA will answer any question directed to them in the Student Discussion Forum within one business day of posting.
- The instructor and the TA will respond to questions posed via email within one business day.
- The instructor will be available after each class meeting (up to ten minutes) for discussions with students.
- Students may make requests via email for appointments to meet with the instructor outside of class and office hours.

Expectations for learner participation and interaction

Some course activities, including synchronous class sessions and Moodle Forums, will require you to interact with other students in the course. Any specific communication expectations, including frequency and content, are detailed in the information about each assignment or activity when it appears in the course.

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Grading

Grading criteria, details

Component	Weight	Details
Assignments	20%	These are the assignments you will submit as part of your weekly materials and data analysis project work.
Discussion Forum Participation	25%	You will have at least one discussion forum every week, with the exceptions of weeks when you will be doing peer reviews.
Written Introduction	10%	The draft of your written introduction you submit during week 5.
Video Introduction	5%	Video introduction you submit during week 5.
Written Methods	10%	Revised introduction and draft methods section you submit during week 8.
Final Report	15%	Final written report you submit during week 15.
Final Presentation	15%	Final video presentation you submit during week 15.

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Grading scale

This Course uses Standard NCSU Letter Grading:

97	≤	A+	≤	100
93	≤	A	<	97
90	≤	A-	<	93
87	≤	B+	<	90
83	≤	B	<	87
80	≤	B-	<	83
77	≤	C+	<	80
73	≤	C	<	77
70	≤	C-	<	73
67	≤	D+	<	70
60	≤	D	<	67
0	≤	F	<	60

Requirements for earning a grade of "Satisfactory"

If you are taking this course for credit only (S/U), your grade will be reported as S (Satisfactory) when coursework is equivalent to a C- or better or U (Unsatisfactory) when coursework is equivalent to less than a C-. For more information, see the Credit Only Courses regulation.

Requirements and procedures for auditing this course

Auditing this course is approved on a case-by-case basis. Please contact the course instructor to attain approval. Refer to the Audit regulation for more information and links to required forms.

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Course Schedule

Please note: the course schedule is subject to change.

Week Beginning	Topics	Project Milestones	Important Dates
12-Jan	Welcome and Introduction	Select/Assign Projects	
19-Jan	Structuring and Holding Meetings		20-Jan: Last day to add without permission
26-Jan	Communication	First Client Meeting	26-Jan: Census Day
2-Feb	How to give Good Presentations	First Project Team Meeting with Instructor	
9-Feb	Statistical Ethics		
16-Feb	Peer review other groups' video intros	Written introductions and 3-5 minute intro video are due	17-Feb: Wellness Day
23-Feb	The p-Value		
2-Mar	Methods Section and Analysis Plan	Second Project Team Meeting with Instructor	
9-Mar	Peer Feedback and Polishing your Writing	Introduction and proposed methods section due	
16-Mar	Spring Break		
23-Mar	Peer review of other groups' Introduction and Methods		25-Mar: Drop Day
30-Mar	Communicating Results		
6-Apr	The Value of a Statistician	Third Project Team Meeting with Instructor	
13-Apr	Thinking Critically about Statistics	Draft final report due	
20-Apr	Work Week	Final presentation due	
27-Apr	Peer Review Final Presentations	Final report due	28-Apr: Last Day of Class
4-May		8-May: Grades Due	8-May: Grades Due

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Course Policies

Late assignments

Late assignments will not be accepted without approval from the instructor at least 24 hours prior to the submission date and time.

Incomplete grades, withdrawals

Information on incomplete grades can be found at REG 02.50.03 – Grades and Grade Point Average. If you encounter a serious disruption to your work not caused by you and you would have otherwise completed the course, contact your instructor as soon as you can to discuss the possibility of earning an incomplete in the course for the semester, including an agreement on when the remaining work must be done to change the grade to the appropriate letter grade.

If you must drop a course or withdraw from the University due to hardship beyond their control, see Withdrawal Process and Timeline | Student Services Center for information and instructions.

Attendance

- Attendance at in-person class meetings is encouraged so that students can interact and ask questions of the instructor but is not required.

Related NC State Policy: REG 02.20.03 – Attendance Regulations

University Policies

Academic integrity and honesty

Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct 11.35.01 sections 8 and 9. Therefore, students are required to uphold the Pack Pledge: "I have neither

given nor received unauthorized aid on this test or assignment." Violations of academic integrity will be handled in accordance with the [Student Discipline Procedures](#).

Please refer to the [Academic Integrity](#) web page for a detailed explanation of the University's policies on academic integrity and some of the common understandings related to those policies.

Student privacy

Originality Checking Software

Software is not used in this course to detect the originality of student submissions.

Class recording statement:

In-class sessions are recorded in such a way that they might also record students in this course. These recordings MAY be used beyond the current semester or in any other setting outside of the course. Contact your instructor if you have concerns.

Class privacy statement:

This course requires online exchanges among students and the instructor, but NOT with people outside the course. Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web postings, where relevant to the course. Examples include online discussions of class topics and posting of student coursework. All students are expected to respect each other's privacy by not sharing or using such information outside the course.

Other Policies

Students are responsible for reviewing the NC State University PRR's which pertain to their course rights and responsibilities:

- [Equal Opportunity and Non-Discrimination Policy Statement](#) and [additional references](#)

- [Code of Student Conduct](#)

- [Grades and Grade Point Average](#)

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- [Credit-Only Courses](#)

- [Audits](#)

Student Resources

Academic and Student Affairs maintains a website with links for student support on campus, including academic support, community support, health and wellness, financial hardship or insecurity, and more. [Find Help on Campus.](#)

Disability resources

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the [Disability Resource Office (DRO)](#). For more information on NC State's policy on working with students with disabilities, please see the [Policies, Rules and Regulations page maintained by the DRO](#) and [REG 02.20.01 Academic Accommodations for Students with Disabilities](#).

Safe at NC State

At NC State, we take the health and safety of students, faculty and staff seriously. [The Office of Equal Opportunity](#) supports the university community by providing services and resources to support and guide individuals in obtaining the help they need. See the [Safe at NC State webpage](#) for resources.

Supporting Fellow Students in Distress

As members of the NC State Wolfpack community, we each share a personal responsibility to express concern for one another and to ensure that this classroom and the campus as a whole remain a healthy and safe environment for learning. Occasionally, you may come across a fellow classmate whose personal behavior concerns or worries you, either for the classmate's well-being or yours. If you feel this way, I would encourage you to report this behavior to the [NC State CARES website](#). Although you can report anonymously, it is preferred that you share your contact information so they can follow up with you personally.

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Course Evaluations

ClassEval is the end-of-semester survey for students to evaluate the instruction of all university classes. The current survey is administered online and includes 12 closed-ended questions and 3 open-ended questions. Deans, department heads, and instructors may add a limited number of their own questions to these 15 common-core questions.

Each semester students' responses are compiled into a ClassEval report for every instructor and class. Instructors use the evaluations to improve instruction and include them in their promotion and tenure dossiers, while department heads use them in annual reviews. The reports are included in instructors' personnel files and are considered confidential.

Online class evaluations will be available for students to complete during the last two weeks of the semester for full-semester courses and the last week of shorter sessions. Students will receive an email directing them to a website to complete class evaluations. These are available at 8 am on the first day of finals.

- Contact ClassEval Help Desk: classeval@ncsu.edu

- ClassEval website

- More information about ClassEval

Syllabus Modification Statement

Our syllabus represents a flexible agreement. It outlines the topics we will cover and the order in which we will cover them. Dates for assignments represent the earliest possible time they would be due. The pace of the class depends on student mastery and interests. Thus, minor changes in the syllabus can occur if we need to slow down or speed up the pace of instruction.