

ISE369/POL369

Introduction to Political Informatics

Course Information

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General Class Issues

- Instructor (contact info in syllabus)
 - R. Kelly
- Face-to-face class (with some synchronous Zoom sessions)
- Requirements
 - Some programming
 - Some applied math
 - Some political science course covering US government
- Helpful courses
 - Python
 - Geometry

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Cross Listed Course

- ISE369 and POL369
- We use a common approach that works with both majors
- Political Informatics
 - What is the meaning and background to data used in political science
 - How do we access the data and use it to analyze political science issues

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Introduction to Political Informatics

(updated 1/22/2026)

News

- Welcome to ISE369 / POL369.

Course Information

Semester:	Spring 2026
Time:	Tuesday and Thursday, 12-30PM - 1:50PM
Location/Delivery:	In-person and Synchronous Online: direct instruction occurs in real time either in the designated classroom (CS2120) or via a Zoom session. Most sessions are planned to be offered in-person, but some sessions may be held through Zoom if the educational objectives can be better achieved on-line. For any on-line session, an e-mail message will be sent in advance to each student with the URL needed to access the session. Recordings of in-person class sessions will not be made available, so be sure to attend during the regular class hours. Recordings of on-line class sessions will also not be made available, but you will be enabled to record each session once you are admitted into the Zoom session.
Texts	1. The Politics of Congressional Elections, 11th Edition (or 10th Edition), Jamie L. Carson and Gary C. Jacobson, Rowman & Littlefield Publishers, 2024, ISBN-13: 978-1538176733. 2. Data Analysis for Political Science, Robert F. Kelly, 2026 (chapters will be provided in

Links

- [HW gp](#)
- [Possible](#)
- [TAs](#)
- [Supple](#)

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CSE416 – Software Engineering

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ISE369/POL369 Web Site

- Check it regularly for
 - Syllabus
 - In-progress grades
 - Course calendar
 - Office hours / location / e-mail addresses
 - Assignments and lecture code
 - Class notes (pdf)
 - References
 - Lots more

ISE369/POL369 does not use Brightspace

Check this out now to be sure you can access the syllabus

<https://www3.cs.stonybrook.edu/~ise369/>

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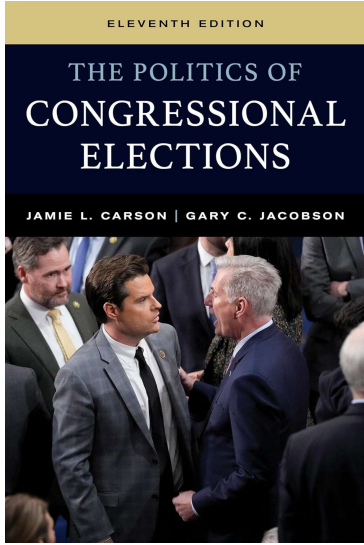
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Texts

- **Required**
 - Data Analysis for Political Science, Robert F. Kelly, 2026 (chapters will be provided in class)
 - The Politics of Congressional Elections, 11th Edition, Jamie L. Carson, Gary G. Jacobson, Rowman & Littlefield Publishers, 2024, ISBN-13: 978-1538176733 (paperback)
- **Helpful**
 - Python for Data Analysis, 2nd Edition, Wes McKinney, O'Reilly Media, Inc., October 2017, ISBN-13: 978-1-491-95766-0.

Older editions will likely be less expensive and still helpful



Other readings will be introduced in class

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Varied Student Backgrounds

- 2026 enrollment
 - 20 ISE majors
 - 13 POL majors
 - 7 others (primarily A&S programs)
- Feedback from previous offering
 - Python coding was manageable for those students with a minimal programming background
 - Python and Python library setup was sometimes tedious, but manageable with help from TAs
- Feedback from students is very important during the semester. If additional prerequisites would have helped understand the material

Exams will treat varied backgrounds fairly

Please let me know if the pace is too fast, too slow, etc.

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What Do You Expect to Learn in This Course?

- Python skills?
- Awareness of how data is used in the US political process?
- Data analysis skills?
- Data visualization skills?

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Format

- In-person and synchronous on-line (Zoom)
- Most (possibly all) sessions are planned to be offered in-person
- Possible on-line sessions due to
 - Weather
 - Medical issues (e.g., another pandemic)

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Office Hours

- All office hours done through Zoom
 - Student Zoom meetings are mostly outside of posted office hours
 - Send me an e-mail request for a Zoom meeting, and I will schedule it no later than the next office hours block
 - All office hours sessions are scheduled
 - Posted hours
 - Mondays, 5:00PM-6:30PM
 - Wednesdays, 2:30PM-4:00PM
- I should be able to schedule most requests within a day

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When (If) We Have Zoom Class Sessions

- Zoom invite sent a few hours before scheduled class time
- I will try to open the Zoom session 30 minutes before class time for unmonitored student discussions
- If you are in an environment OK for video, please enable your video (helps me to see who is out there). If not, please use a photo.
- Please mute your audio until you are ready to speak
- Please use chat to post any question or comment. I check the chat screen every few minutes, and I'll repeat comments and answer questions that are helpful to other students. Verbal questions are also OK.
- There is no posted recording of each Zoom session, but ask for permission to record the session (TA will grant permissions at the start of each class)
- We'll end the class no later than the official class end time, but I will stay on-line for extra questions

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In-Class Communications

- During class, If you wear a mask when asking a question
 - Remember that masking makes in-class communications more difficult,
 - Please speak slowly when interacting
- After class questions handled on the side of the classroom

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Course Outcomes

- Students will understand the legal and legislative requirements for fair elections.
- Students will understand the semantics and processing of data sets used for political analysis and apply that understanding to the processing of actual election data.
- Students will combine multiple data sets to analyze the racial and political fairness of election results.

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Reading Vs. Doing

- You learn by reading, listening, discussing, and doing (most important)
- Usually, we will discuss a topic in class before you include it in your work – but not always

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Topics

- | | |
|--|---|
| • US political process | • Data analysis tools |
| • Campaign finance policies and data | • US Census data |
| • Python fundamentals | • Micro-targeting |
| • Political, demographic, and geographic data sets | • Election security |
| • Gerrymandering | • Districting ensemble analysis using MCMC techniques |
| • Social media | • Processing of geographic data |
| | • Redistricting processes |

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Grading

A programming handout may be provided during both exams

- A, B, C ... grades
- Grade basis
 - Assignments
 - Exams (mid-term and final)
 - Quizzes (2-5)
 - Oral communications (class discussions and presentations)
- Mid-term exam – 1-hour closed book
- Final exam – 1-hour closed book
- In-progress grades will be available in the class Web site, make sure that you check it regularly

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Grading

- Final grades are calculated based on a formula (no subjective grading)
- Formula weights all the components of the class
 - Mid-term exam - 35%
 - Final exam – 25%
 - Quizzes – 20%
 - Assignments – 10%
 - Oral communications – 10%
- Final grade is based on your total score (the higher the score, the higher the grade)

The best way to prepare for your exams is to pay attention in class and carefully work your assignments

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Grade Status

In-progress rank and grade status is available regularly

Note the ISE369/POL369 ID

369	Oral Comm.		HW				Quizzes						Midterm	Final	SubTotal	Study	Total	Rank	Final
ID	In-class	Norm	1	2	Tot.	Norm.	1	2	3	4	Total	Norm.	Score	Score					Grade
23	4	66.7	19.0	9.5	28.5	98.3	6.0	7.0	5.0	7.0	20.0	69.0	54.0	46.0	59.54		59.54	18	B-
37		0.0	0.0	0	0.0	0.0	6.0	5.0	6.0	0.0	17.0	58.6	0.0	0.0	8.79		8.79	27	W
15		0.0	17.0	0	17.0	58.6	10.0	5.0	0.0	8.0	23.0	79.3	77.0	66.0	64.51	Y	65.15	14	B+
10		0.0	19.0	8	27.0	93.1	7.0	4.0	8.0	9.0	24.0	82.8	62.0	53.0	59.32	Y	59.92	19	B-
9	3	50.0	19.0	7.5	26.5	91.4	9.0	7.0	6.0	8.0	24.0	82.8	68.0	61.0	68.65	Y	69.34	10	A-
14	2	33.3	19.0	10	29.0	100.0	9.0	7.0	8.0	9.0	26.0	89.7	73.0	51.0	67.63	Y	68.31	11	B+
16	2	33.3	19.0	7.5	26.5	91.4	9.0	4.0	6.0	0.0	19.0	65.5	51.5	37.0	51.42	Y	51.94	22	C+
20	3	50.0	19.0	7.5	26.5	91.4	3.0	4.0	8.0	8.0	20.0	69.0	80.0	68.0	72.88	Y	73.61	6	A
18		0.0	17.0	9.5	26.5	91.4	6.0	7.0	6.0	9.0	22.0	75.9	66.0	56.0	60.42	Y	61.02	17	B
3	5	83.3	19.0	10	29.0	100.0	10.0	8.0	7.0	8.0	26.0	89.7	71.0	79.0	80.33	Y	81.13	2	A
13		0.0	0.0	0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	10.3	0.0	0.0	1.55		1.55	30	W
36	7	100.0	19.0	10	29.0	100.0	8.5	5.0	4.0	8.0	21.5	74.1	61.0	56.0	69.27	Y	69.96	7	A-

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Exams

- Mid-term and final
- Questions will cover material found in lectures, readings, and assignments.
- Questions will emphasize thinking and analysis over memorization
- For programming questions, you may be given a limited API for relevant Python libraries

Exams and quizzes will allow for some different questions for POL and ISE students

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Assignments

- You can work with one other student on assignments
- Submit once for the group
- Feedback
 - You may get feedback from TAs (time permitting), but remember that your knowledge of the assignments will be tested in your exams
 - Good to volunteer in class for assignment discussions
 - Submitting on-time counts to your grade
- Details once TAs are assigned

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Oral Communications Grade

- Components
 - Volunteer presentations
 - Interaction in class (e.g., questions, experiences, etc.)
 - Piazza posts
- A TA will monitor in-class communications
- Good communications takes lots of practice – the class is the place to get that experience

Being silent is a big risk to your grade

We try to make class material relevant to current political analysis, so you should be aware of current related topics

Zoom chat posts count as interaction (if we conduct any classes in Zoom)

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Example – Oral Communications

- Analysis of another student's work should:
 - Be offered in a way that is positive and respectful of the other student
 - Show an understanding of the material the other student presented
 - Contribute to the overall class understanding of the material

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Academic Integrity

- Representing another person's work as your own is always wrong
 - Assignments
 - Exams
- Gaining an unfair advantage in grading harms other students
- Suspected instances of academic dishonesty will be reported to the Academic Judiciary
- For details, refer to the Academic Judiciary Web site (link on class home page)

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AI Issues for Academic Integrity

- You can use AI tools to aid in your HW assignments
- However,
 - You should reference any AI tool that was used to generate more than a trivial amount of code or text
 - You need to understand any code that was provided to you with an AI tool

Details of the AI policy are
in the syllabus

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Other AI Issues

- Previous experience related to AI
 - Many uses of AI (data gathering, code assist, test data generation, etc.)
 - Improved quality and quantity of code
 - Decreased analysis of requirements
 - Decreased quality of design thinking
- Impact of AI on immediate career goals
 - Difficult employment situation
 - Decreased importance of programming skills
 - Increased importance of communication skills
 - Increased importance of design skills

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Hardware Requirements

- Software for the course should be available to you at no cost for your own computer
- If you need to use a University computer for assignments, studies, etc. you can use a CS Lab
- For in-class hands-on work, you can use your personal laptop or work with a nearby student who has a laptop

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Python Development Environment

- Python language level for the course is Python 3.14 (maybe 3.13)
- We've verified that the libraries are compatible with a previous version, but 3.14 should be OK also
- You can use whatever Python development platform you are comfortable with – however
 - The official Python IDE for the course is PyCharm 2025.3 – Community Edition
- PyCharm development will be
 - Supported by the TAs
 - The basis of exercises shown in class

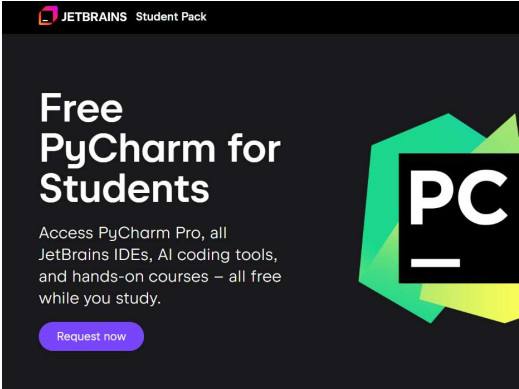
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PyCharm

- You should use the Educational Edition of PyCharm for your work, which you can access at <https://lp.jetbrains.com/pycharm-for-students/>

You will be using PyCharm in the next class session, so please install it before then

A promotional banner for the JetBrains Student Pack. It features a dark background with a green and yellow geometric shape on the right containing the letters 'PC'. The text reads: 'Free PyCharm for Students', 'Access PyCharm Pro, all JetBrains IDEs, AI coding tools, and hands-on courses – all free while you study.', and a 'Request now' button.

JETBRAINS Student Pack

Free PyCharm for Students

Access PyCharm Pro, all JetBrains IDEs, AI coding tools, and hands-on courses – all free while you study.

Request now

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Python Libraries

- Python libraries are important to the course
- Be sure to use the Conda installer for any packages
- You will need to set a project on PyCharm (if you use it) that defaults to the Conda installer

Be sure to not mix Conda and Pip for your library installs

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Piazza

Piazza is changing its policies, so this might change

- Piazza is a Q&A platform designed to get you answers from classmates, TAs, and instructors
- It serves as a forum to allow you to collaborate and solve common challenges
- Remember that helping classmates does not negatively impact your grade (no curve)
- You can post any doubts you have or errors you may encounter, and we will post our answers on Piazza directly
- You are also encouraged to answer any questions posted by your classmates. This way when an issue is resolved, everyone gets to benefit and learn from the answer.

Critical mass is important to effective use of Piazza

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How to Get Help

- Don't get stuck on a problem - ask for help
- Post any question to Piazza
- TAs
 - Are available (see TA page in class Web site)
 - TAs should be able to help you use most of the libraries, frameworks, IDE
 - Their email addresses are in the TA page, so contact them directly (with a cc to the instructors) if you are having a programming/library problem
- Send me an e-mail if you are having any other trouble
- See me during office hours (or by appointment)

TAs being finalized now, and will be added to Web site soon

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Your First Assignment

- Send us an e-mail (to robkelly@cs.stonybrook.edu)
- E.g., (Hi!, name, id#, “I love Stony Brook”)
 - Put “ISE369/POL369 – HW#1” in the subject line of the e-mail message

You will receive a response that
includes your ISE369/POL369 ID #