

ISS 305 (Section 2) – Evaluating Evidence: Becoming a Smart Research Consumer
Fall Semester, 2019: Tuesday and Thursday 3:00pm – 4:50pm, 326 Natural Sciences

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Office hours: Monday, Tuesday, & Wednesday 12:00pm – 1:00pm (or by appointment) in Psychology 252a

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Office hours: Wednesday 11am – 12:00pm (or by appointment) in Psychology 15B

Required Textbook: Darrell Huff. *How to Lie with Statistics*. New York: Norton, 1954.

Additional Readings: A reading list of additional content sources is posted on D2L.

I>CLICKER: We will be using the I>CLICKER device (see www.iclicker.com for general information) in the class. This is a device which will permit you to record your answers to mini-quiz questions in class. Each student must have their own I>CLICKER (or I>CLICKER2 or I>CLICKER+, but not the WEB>CLICKER). They are available (new or used) in local bookstores, and can also be purchased new (amazon) or used (eBay) on the Internet. To register your I>CLICKER, login to D2L and select this course.

Once on your Course Homepage, locate the I>CLICKER registration link in Content. Register your I>CLICKER remote by entering your I>CLICKER remote ID in the field provided and clicker “Register”. We will use them every day in class, and you are responsible for bringing your I>CLICKER to lecture.

Course Webpage: On D2L (<https://d2l.msu.edu/>). This page will provide you with the notes for the lectures, the reading list, grades, and other important class information.

Course Objectives: This course’s goal is to help make students better consumers of empirical evidence. Among the topics that will be covered are the following: distinguishing between questions that can and cannot be addressed empirically; recognizing when sufficient information has been provided to establish predictive and causal relationships; common ways of using statistics and graphs to inform and to misinform; the role of judgmental heuristics in evaluating evidence; typical confounds in experimental designs; typical flaws in survey research. Students will not undertake empirical research projects – this will not be a laboratory course. Students will examine, analyze, and evaluate formal (e.g., journals) and informal reports of research (e.g., everyday conversations, newspapers, magazines, etc.). In addition, students who complete an ISS course at MSU are expected to demonstrate at least three of the five knowledge, attitude and skill dimensions associated with the following MSU Undergraduate Learning Goals:

- *Analytical Thinking:* The student uses ways of knowing from the social sciences to access information and critically analyzes complex material in order to evaluate evidence, construct reasoned arguments, and communicate inferences and conclusions. There are two dimensions of analytical thinking in ISS.
- *Cultural Understanding:* The student comprehends global and cultural diversity within historical and societal contexts. There is one dimension of cultural understanding in ISS.
- *Effective Citizenship:* The student participates as a member of local, national, and global communities and has the capacity to lead in an increasingly interdependent world. There is one dimension of effective citizenship in ISS.
- *Integrated Reasoning:* The student integrates discipline-based knowledge to make informed decisions that reflect humane social values. There is one dimension of integrated reasoning.

ISS Undergraduate Learning Goals Rubric: 300 Level Courses

ISS ULG Dimension	Developing Level	Pursued in this course?
Analytical Thinking		
1. Acquires, analyzes, and evaluates information from multiple social science sources.	Retrieves information from a limited range of social science sources and identifies biases, strengths, and weaknesses within those sources.	Yes
2. Synthesizes and applies information within and across social science disciplines.	Identifies how information can be conceptualized differently within various social science disciplines.	Yes
Cultural Understanding		
3. Demonstrates awareness of how diversity emerges within and across cultures.	Understands culture and diversity as dynamic and contextual.	Not at the developing level, but you will be able to recognize multiple definitions and expressions of culture and diversity through various in-class discussions.
Effective Citizenship		
4. Understands the structures of local, national, and global governance systems and acts effectively within those structures in both individual and collaborative ways.	Identifies strengths and challenges within institutional structures to address societal issues in individual and collaborative ways.	No
Integrated Reasoning		
5. Uses a variety of inquiry strategies incorporating multiple views to make value judgments, solve problems, answer questions, and generate new understanding.	Identifies distinct and valid inquiry strategies associated with specific social science fields of study and experiments with strategies within and/or across disciplines.	Yes

Course Format: Please note that most lectures will not just be a rehashing of reading material, but rather will attempt to clarify, extend, and illustrate the readings. The only way to develop the kinds of skills this course is designed to nurture is through lots of practice. Therefore, much of our regular lecture periods will be spent working through examples to illustrate the course material. This "working through" will not consist of the instructor simply laying out a question and then answering it for you, but will consist mostly of contributions and discussion by students as well as students answering "mini-quiz" questions during class. To that end, extra-credit in this course can be earned by active participation during the class periods.

Evaluation Criteria:

In-Class Mini-Quizzes: During every lecture, Dr. Weaver will pose a number of multiple-choice questions that you will answer using your I>CLICKER device. Each day you will get a certain % correct – your In-Class Mini-Quiz% for the day. You will have 21 In-Class Mini-Quiz% scores after excluding the following: the first two lectures (8/29 and 9/3), three exam days (10/1, 10/31, and 12/5), and two team assignment meeting days (10/3 and 11/5). On certain days you may unavoidably miss the lecture, or find it hard to grasp the material. To make allowances for such occasions, Dr. Weaver will drop your lowest **six** In-Class Mini-Quiz% scores. Thus, the In-Class Mini-Quiz points you receive are determined by your highest 15 In-Class Mini-Quiz% scores. In-Class Mini-Quiz questions determine 5% of your course grade.

If you forget your I>CLICKER or if your batteries are dead, you cannot obtain credit for that day of class.

Excused or unexcused absences also will not receive credit for that day of class. Please understand that in a

class of almost 270 students, there will be at least one person who forgets their clicker or batteries each day and Dr. Weaver simply cannot give credit in these circumstances. **Please do not ask!** Also, please note that **recording answers using anybody's I>CLICKER but your own constitutes providing false information to the instructor and is a violation of class and University rules.**

Team Assignments: Every student will be placed into teams after the second week of classes to complete 3 team assignments. The first assignment is worth 5% of your course grade, the second is worth 10%, the third is worth 5%, and team participation is worth 5%. Assignment specifics will be posted on D2L after the second week of classes.

Exams: Four exams will be given in class – three during the regularly scheduled class period, and one during the final exam period. The first three exams emphasize material covered since the previous exam. The final exam is cumulative. Each exam will consist of multiple-choice questions. Your three best exam scores will account for 70% of your final grade. Your lowest exam score will be dropped. For instance, if you do well on the first three exams, your grade on the cumulative final exam will not matter. If you are comfortable with your grade you do not need to take (or show up) to the final exam. Or, if you do poorly on one of the first three exams, you can take the final exam to make up for it.

Makeup Exams: No makeup quizzes or exams will be given unless you have a valid excuse. **You must notify Dr. Weaver that you have a valid excuse by the end of the day of the given quiz or exam. Failure to do so will result in you not being allowed to take the makeup quiz or exam.** There are no exceptions to these rules.

If you cannot take the exam because of a religious holiday, required participation in a university-sanctioned event (e.g., a commitment for a sports team), or some other acceptable event that can be foreseen, you must notify Dr. Weaver **at least two weeks in advance** of the exam day. Absence from an exam **for any other reason** – family obligations, job interviews, and vacations – will result in a grade of 0 for that exam.

Exams 1-3 will begin at 3:00pm. The Final Exam will begin at 10:00am. You may arrive late, but no more exams will be handed out after the first student completes the exam. Exams 1-3 must be turned in by 4:50pm. The Final Exam must be turned in by 12:00pm. During exams, you may only have pencils and erasers at your desk. Leave refreshments or other materials zipped up in your book bag or do not bring them at all. Turn off anything that makes noise and please do not wear hats. Once the exam has begun, there will be no talking or disruptions. Leaving the room is reserved for emergency bathroom breaks only.

Exam grades will be posted online as soon as they are available from the scoring office. Exams will not be posted, but you may view your exams during Dr. Weaver's, or Rosaura's, office hours. **However, each exam must be looked at before the next exam is given. For example, after Exam 2 has been given you are no longer permitted to view Exam 1.**

Extra Credit: The exams are challenging, therefore, there are two ways to earn extra course points.

1. **Class participation:** You can earn up to 2% extra course points by participating actively in class. During lecture, Dr. Weaver will ask many questions of the class. He will call on volunteers to answer the questions. If you make a reasonable try at answering such a question, he will give you a specially-marked poker chip. Widespread participation is encouraged! Therefore, the first 10 chips you earn will be worth more than your later chips. The first 10 poker chips are worth 0.1% extra course points each, and the next 20 are worth 0.05% each. Dr. Weaver will make every effort to call on volunteers who haven't said much before, so that everyone who is willing to participate will get a chance to earn this extra credit. The whole point of offering extra-credit in this way is to encourage you to stay engaged with the material. You should hold onto all the chips you receive. The chips will be collected throughout the semester. (Dr. Weaver cannot replace lost chips. Put them in a safe place.) The more chips, the more extra-credit points you receive. Again, the maximum number of points you can earn in this way is 2% (or $30 \text{ chips} = [10 \times 0.1\%] + [20 \times 0.05\%]$).

2. Participation in psychological research: One place where empirical evidence is gathered and evaluated is in formal research studies. So, you can learn a bit about being a smart research consumer by making careful observations of how actual research is done. Therefore, the second way to earn extra-credit in this course is to participate in ongoing research. All such participation will be through the Department of Psychology's SONA system. You will receive 0.1% extra-credit points for each half-hour that you spend participating in an experiment or study, up to a maximum of 1% (or, 5 total hours). **More detailed information for setting up your HPR / SONA account and how to sign up for research hours will be provided on the D2L course webpage.**

2a. Alternative to research participation: If you do not wish to participate in psychological research, you may write a research-based paper that is designed for this situation. Details about the paper requirements are posted on D2L. All papers are due by November 22nd, 2019 at 5pm. The assignments folder will close promptly at 5pm and no papers will be accepted after this. **There are no exceptions to this rule.**

Honors Option: An honors option is not offered for this course.

Grading: Your final grade will be based on the following course percentage points:

Requirement	% of final grade
Top 3 (out of 4) Exam Scores	70%
Top 15 (out of 21) In-Class Mini-Quiz Scores	5%
Team Assignment #1	5%
Team Assignment #2	10%
Team Assignment #3	5%
Team Member Score	5%
Total	100%
Extra Credit	+3% potentially

The grading scale is as follows:

Percentage	Grade
89.50 – 100	4.0
84.50 – 89.49	3.5
79.50 – 84.49	3.0
74.50 – 79.49	2.5
69.50 – 74.49	2.0
64.50 – 69.49	1.5
59.50 – 64.49	1.0
0 – 59.49	0.0

Policy on grade changes: Extra credit is the only way to increase your point total if you are concerned about falling on the wrong side on one of these cut-offs. At the end of the semester, if you believe that an error was made in calculating your grade, please let Dr. Weaver know. Your grade will be checked, and changed if an error was made. **This is the only circumstance under which your grade will change.** Under no circumstance will your grade be “bumped”, or a special extra credit opportunity be given. Please don't ask. **There will be no exceptions.**

Cheating: Any student caught cheating on an exam or plagiarizing an assignment will receive a zero for the course, and be reported to the University.

Academic Honesty: Any and all forms of cheating are unacceptable. Students are expected to complete quizzes and exams individually and without outside help. Any student caught cheating on exams or written assignments

will receive a ZERO in this course. Legalistic Details: Article 2.3.3 of the *Academic Freedom Report* states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the Psychology Department adheres to the policies on academic honesty as specified in General Student Regulations 1.0, *Protection of Scholarship and Grades*; the all-University Policy on *Integrity of Scholarship and Grades*; and Ordinance 17.00, Examinations. For extensive details see *Spartan Life: Student Handbook and Resource Guide*. Further information about cheating can be found on a website provided by the MSU Ombudsman (<https://www.msu.edu/~ombud/academic-integrity/student-faq.html>). Make sure you are familiar with MSU definitions regarding academic dishonesty. Ignorance is not an excuse.

You are expected to develop original work for this course; therefore, unless authorized, you are expected to complete all course assignments, including homework and exams, without assistance from any source (except as specified in the assignment). This also means that you may not submit course work you completed for another course to satisfy the requirements for this course. In addition, plagiarism of written work is forbidden. It includes taking the work of another individual or source and presenting it as your own. This is considered plagiarism even if the source has given you permission to use their work, or the work is in the public domain (e.g., on the web). Students who violate MSU academic integrity rules may receive a penalty grade, including a failing grade on the assignment or in the course; and may be reported to the Office of Academic Affairs and the Office of Student Affairs. Contact your instructor, or TA, if you are unsure about the appropriateness of your course work. Or, for examples of what constitutes plagiarism, see:

- <https://wts.indiana.edu/writing-guides/plagiarism.html>
- https://owl.purdue.edu/owl/research_and_citation/using_research/avoiding_plagiarism/index.html

Policy on Religious Observations: If you anticipate being absent from class due to a major religious observance, please provide notice of the date(s) to me, in writing, by 9/6/18.

Note taking and recording: You are encouraged to take notes on the lecture and are permitted to tape-record class sessions for your own purposes. However, you are not permitted to take notes or tape-record for purposes of sale and distribution, no matter how financially lucrative Dr. Weaver's lectures might be.

Accommodations for Students with Disabilities: Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at <http://rcpd.msu.edu>. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. **Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (exam, quiz, etc.). Requests received after this date may not be honored.**

If you require testing accommodations (additional time, less disruptive room, etc.) you must contact Dr. Weaver and present your VISA at least two weeks before the exam date to schedule an alternative exam. Typically, you can take the exam during a special exam session offered by the Psychology Department. Those exams occur in small group settings and Dr. Weaver will contact you regarding the specific times and locations. If you are unable to make the times offered, or that option does not meet your VISA accommodations, you may be able to schedule to take your exam at the RCPD office. In either case, the exam must be scheduled well in advance, so you need to adhere to the two-week prior notification requirement.

Academic Assistance: This is a university and you are expected to produce college level work. If you have any trouble with the material covered in class, please make an appointment to speak with Dr. Weaver or one of the course assistants. Additionally, the university has resources to assist students, such as the Campus Tutorial Center, the Campus Writing Center, Adult Student Services, and more. A lot is expected of you, but the university wants to help you to produce your best work.

Limits to Confidentiality: Please be aware that class materials are generally considered confidential pursuant

to the University's student policies. However, all University employees, including instructors, cannot maintain confidentiality when it conflicts with their responsibility to report certain issues based on external legal obligations or health and safety considerations of MSU community members and others. Dr. Weaver and Rosaura must report the following information (including your name and the details of the disclosure) to the Office of Inclusion if you share it with us:

- **Suspected child abuse/neglect, even if this maltreatment happened when you were a child,**
- **Allegations of sexual assault or sexual harassment when they involve MSU students, faculty or staff, and**
- **Credible threats of harm to oneself or to others.**

The Office of Inclusion will reach out to you via a confidential email, to see if you would like to pursue legal action and to provide you with additional university resources. **You have the right to choose whether or not you would like to utilize any of these services or even respond to the university's email.** If you would like to talk about these events in a more confidential setting, you are encouraged to make an appointment with the MSU Counseling Center (<http://counseling.msu.edu>).

E-Mail Policy: E-mail is the best way to get a hold of us (Dr. Weaver or one of the course assistants). However, please use the following guidelines when e-mailing one of us:

- **First, ask yourself this question: "Can this question be answered by looking in the syllabus or looking on the D2L course site?"**
- Use ISS 305 in the subject line that makes it clear you are a student in this course asking a question. This helps to prevent e-mails from going directly to the junk folder.
- Please address the e-mail properly (i.e., Hi Rosaura; Hello Dr. Weaver).
- Proofread your e-mail. Is your question conveyed clearly with correct grammar and spelling? Did autocorrect make it sound super weird?
- Please sign your e-mail with your full name, so we know who you are. We can't wait to get to know all of you, but maizeandbluearetheworst@spartans.com makes it hard for us to know who you are.
- Be polite.

Check your e-mail and course site regularly! During the course, we will e-mail you or post on the course site from time to time with announcements and reminders. Please read these e-mails or posts as soon as you receive them, and please check your e-mail and the course site regularly.

Disclaimer: As the instructor, Dr. Weaver reserves the right to make any changes that are deemed necessary to the details and/or policies listed in this syllabus. This includes adjusting the schedule according to the pace of the course and the needs of the students. **Check D2L regularly to keep up with the topics. You will be given notice of any changes. Also, please know that you are responsible for keeping track of all quiz and exam dates.**

Dr. Weaver's five rules for a happy and productive class:
*1) Put your cell phones away. 2) Show up to lectures on time.
3) Ask questions. 4) Be courteous of other people.
5) Wait for lecture to end before packing up your stuff to leave.*

List of Course Topics: Check the course D2L page to see which readings are assigned for each topic and to keep up with topics.

1. Introduction to course
2. Fallacies of reasoning
3. Empirical statements and arguments
4. Science as a method of evaluation
5. Problems of measurement
6. Problems of description
7. Establishing associations
8. Real vs. illusory effects
9. Establishing causal relationships (Essentials of exp. methods)
10. Evaluating non-experimental evidence
11. Generalization

Exam, Team Meeting, and Assignment Schedule:

Exam 1: Tuesday, October 1st

Team Meeting Day / No Lecture (Recorded Lecture Posted): Thursday, October 3rd

Team Assignment #1: Friday, October 11th at Noon

Exam 2: Thursday, October 31st

Team Meeting Day / No Lecture (Recorded Lecture Posted): Tuesday, November 5th

Team Assignment #2: Friday, November 8th at Noon

Team Assignment #3: Friday, November 22nd at Noon

Team Member Evaluations: Monday, November 25th at Noon

Exam 3: Thursday, December 5th

Cumulative Final: Wednesday, December 11th from 10am – noon in 326 Natural Sciences