

**[TENTATIVE – may change slightly in upcoming months]**  
**Syllabus--JRN-STA 380**  
**News & Numbers: Lies, Statistics, and the Stories Media Tell**

Spring 2009

### **Course Description**

JRN-STA 380 explores the quality of how quantitative ideas and material are represented in daily journalism—where, in fact, most of us get our common-sense ideas about the numbers and data present in our everyday lives. The topics for the course are ripped from current events and headlines—especially those numbers and data related to political polling, the financial crisis, and energy/environmental issues. In analyzing the numbers that underlie such current news stories, we dig under the surface of a *USA Today* graph or a CNN poll to give students the chance to critique contemporary journalism’s use of numerical representations. In the course we examine and critique concepts such as journalistic objectivity and bias, the concept of uncertainty, and various visual presentations of numerical data. We also give students opportunities to craft their own articles on related topics, some of them tied to course speakers and/or Miami faculty who have expertise in political polls, financial systems, and environmental sustainability. For selected speakers, students will “cover” their lectures and write -- as individuals and in groups --their own news stories. In turn, their stories will be critiqued, not only by course faculty, but by the lecturers themselves to see how well students presented complex numeracy in their journalistic representations. The course, useful to students in any major, advances in-depth critical thinking, promotes clear communication, and teaches compelling storytelling about complex topics. Finally, the course aims to help students understand numbers in a way that helps them become more discerning media consumers, more perceptive journalistic critics, and more actively engaged citizens in democratic life.

### **Course Logistics**

Location: XXX Bachelor Hall  
Days: Tuesday and Thursday  
Times: TBD (or whenever scheduled)

Instructors: A. John Bailer (STA) and Richard Campbell (JRN)

Office hours:  
[JB] TBD  
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### **General learning objectives:**

1. Critically assessing assertions

- Students should be able to incorporate quantitative measures of uncertainty in understanding assertions, such as those found in popular media.
2. Communicating with quantitative concepts
    - Students should be able to interpret graphs and multiple visual displays of information and data.
    - Students should be able to communicate quantitative information in written or graphical forms.
  3. Qualitative dimensions of inquiry
    - Students should have strategies for making decisions in the face of uncertainty and incomplete data.
    - Students should be able to write narratives interpreting quantitative data and their meaning.

**Relationship to Miami Plan goals** (<http://www.units.muohio.edu/led/principles.htm>)

***Thinking critically*** – This course will help students develop confidence in working with data and materials, skepticism in analyzing arguments or presentations, persistence in engaging complex problems and facility in communicating about technical matters.

***Understanding contexts*** – Since a portion of this class will focus on the translation of research or reports in a particular disciplinary domain into the public language of journalism, a contextual understanding is critical. In addition to disciplinary contexts, students will wrestle with the challenges facing journalism in communicating complex stories to the public and in representing appropriately statistics and numbers for understanding uncertainty and variability in the material used in the news reporting.

***Engaging with other learners*** – The course will be taught using a collection of case stories from the popular press and engaging with Miami faculty who are involved in complex numerical research studies that have policy and/or broad public implications. In addition to having their writing and data critiqued by the course instructors, students will serve as editors and peer reviewers of each other's writing and discuss their reporting and writing with the faculty and research that they are interpreting.

***Reflecting and acting*** – Decision making in the face of uncertainty is one of the explicit learning objectives of this course. The class will examine the implications of the research they analyze and the stories they report in terms of how democracy is advanced (or impeded) and how public policy is affected by such reporting. The end goal is for students to publish their work in various journalistic and public forums.

### **Teaching Approach that will be used**

The course will be taught by a journalism professor and a statistics professor. The first half of the course will provide context for understanding both journalism (e.g. news as narrative, journalistic bias) and statistics (e.g. description of data, study designs, uncertainty, etc.), particularly kinds of numeracy required to function as a well-informed citizen. In part, this material will be explored in a series of stories pulled from today's news and in two research projects from key faculty (see

examples below). We will alternate between an emphasis on “news” (journalism) and “numbers” (statistical literacy) each week. While the instructors will be providing some examples, students will be responsible for bringing additional examples to the class for discussion and feedback. Reporters and editors from the news media will visit the class to discuss the art and practice of news reporting of quantitative information. The second half of the class will allow the students to function as working journalists who will interview faculty on their research and write up stories for the local press. Two professors doing work that has numerical contexts will serve as the basis for students’ producing their own reporting and writing. Ideally, we hope to identify work that involves political polls and finances. Student will interview them and write stories about their work. We will also bring in editors who we can partner with in producing stories for actual publication. Publishing in the Cox Publishing group will be a possible outlet along with the *Miami Student*. Finally, we are hoping to link this course with the Journalism Altman spring conference on Journalism and Covering Higher Education.

### Key readings & assignments

<i>Key concepts when reviewing numbers in the news</i>			
Week	Topics	Readings	Other activities
1	Introduction, Uncertainty News and objectivity	CC 1-2	Library/media session for Lexis/Nexis use.  Attending Jan. 21 talk by science-environmental writer Andrew Revkin of the New York Times – quotation exercise.
2	Drawing conclusions from data News as storytelling	CC 3	Meeting with <i>Dayton Daily News</i> Reporter/ Editor*
3	What is a good study? News as science (“Precision JRN”)	CC 4	
4	Polling & Politics News and Bias	CC 11-12	
5	The critical consumer – questions for reporters and the public Interviewing	CC 5	
6	Experimental studies JRN example study	CC 6	
7	Health care JRN example study	CC 7-8	
8	Living in a risky environment JRN example study	CC 9	
<i><sup>1</sup>Producing news with numbers</i>			
9	<sup>2</sup> Faculty research 1	Papers provided by visitors in advance of visit	
10	Faculty research 2	“	
11	Work on fac. research stories	“	
12	Critique—fac. research 1	“	

13	Critique—fac. research 2	“	
14	Group projects--meet w/ editors	“	
15	Group projects		

\* Science reporters from *Dayton Daily News*, *Columbus Dispatch*, and *Cincinnati Enquirer*, Kellyn Moran from the *Miami Student*, and Gary Scott from *WMUB*.

<sup>1</sup>The students will convert each science or stats-based story into a news release and news story. The news story will be published in the *Miami Student* and/or one of the Cox Publishing papers (*DDN*, *JN*).

<sup>2</sup>Possible faculty members who will not only present their research for students to then report as narratives but will help critique the students' writing regarding how well they represented their research in their articles (we are open to suggestions here):

- i. Jim Oris (ZOO) – Effects of jet skis on aquatic life in Lake Tahoe? Is further clean-up needed after the Exxon Valdeese disaster?
- ii. Craig Williamson/Andrew Tucker (ZOO) – Will global warming make western lakes more susceptible to invasive species?
- iii. Rose Marie Ward (KNH) – How common are eating disorders among college students? What are risk factors for eating disorders for college students?
- iv. Bill Even (ECO) – Will you ever be able to afford to retire?
- v. Bill Stiles (PSY) – Does e-therapy work?
- vi. Suzanne Kunkel (GTY) – Are people happier managing their own home health care?

### Required Texts:

Best J. (2001) *Damned Lies and Statistics: Untangling numbers from the media, politicians, and activists*. University of California Press: Berkeley, CA.

Cohn V. and Cope L. (2001) *News and Numbers*. 2<sup>nd</sup> edition. Blackwell Publishing Professional: Ames, Iowa.

### Supplemental text possibilities:

Best J. (2004) *More Damned Lies and Statistics: How Numbers Confuse Public Issues*. University of California Press: Berkeley, CA.

Huff D. (1993) *How to Lie with Statistics*. WW Norton & Company. New York. (orig. 1954)

Jones G. (2006) *How to Lie with Charts*. 2nd Edition. BookSurge Publishing

Levitt S.D. and Dubner S.J. (2006) *Freakonomics [Revised and Expanded]: A Rogue Economist Explores the Hidden Side of Everything*. William Morrow; Revised & Expand, Roughcut edition.

Meyer P. (2002) *Precision Journalism: a reporter's guide to social science methods*. 4<sup>th</sup> edition. Rowman & Littlefield Publishers, Inc.: Oxford, England.

Spirer H. (1998) *Misused Statistics* 2<sup>nd</sup> edition. CRC Press

*Stat-Spotting: A Field Guide to Identifying Dubious Data.* University of California Press.

LexisNexis – both “News” and “Statistics” databases – [www.lib.muohio.edu](http://www.lib.muohio.edu) > “Indices/Databases” > “L” > “LexisNexis News” or “LexisNexis Statistical”

### **Grading Criteria**

1. Class discussion [10%]
2. Short writing exercises/illustrations of current classroom topics from the media [10%]
3. Critical paper – a comparative critical look at the ways different newspapers (e.g. a couple of regional papers and national papers) use numbers, graphs, charts over a particular period [20%]
4. Two major individual stories based on faculty research projects [30%]
5. Critically edit and peer review other stories [10%]
6. Group project – for these we can partner with a publication [20%]

For the journalistic-elements of the pieces produced by the class, the grading criteria are:

- A --article is publishable, as is
- B—article could be published with minor editing
- C—article has potential but need major edits
- R—rewrite please, you have more work to do.

Student may choose to rewrite all journalistic reports after meeting with instructor (s).

For the statistical/scientific elements of the pieces produced by the students, the grading criteria are:

- A – summary of the numerical arguments and background science is correct, clear, and concise.
- B – additional analyses, data displays are required to make this a top story
- C – either numerical arguments or summary of the science background is seriously flawed (but not both).
- R – reanalyze and rewrite, work remains.

All stories will be revised based on comments, and ultimately will aim for publication and/or broadcast. The class has partnerships with various newspapers in the area (including the *Dayton Daily News*, the *Hamilton Journal News*), the *Richmond Palladium-Item*, the *Miami Student*, and WMUB, Miami’s public radio station. Reports will also be posted on various online sites, including the Miami-Valley Public Media Project. As such, it is expected that all work will be of high quality following revision.