Course Introduction

Professor Ron Fricker
Naval Postgraduate School
Monterey, California
Goals for this Lecture

• Introduce professors
  – Contact information
  – Professional experience

• Introduce course
  – Outline of material
  – Brief intro to class project
Contact Information

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Come by or call anytime!
Contact Information

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Stop by anytime. If my door is open, I’m somewhere on campus… if it is urgent, shoot me an e-mail and give me a little notice, and we’ll link up!

In Taiwan with NPS OR Alum
LTC Jason Lin, ROC Army
Prof Fricker Professional Experience

• Academic credentials
  – Ph.D. and M.A. in Statistics, Yale University
  – M.S. in Ops Research, The George Washington University
  – B.S. in Mathematics from the United States Naval Academy

• Teaching credentials
  – Started teaching post-graduate courses in mid-80s
  – Have taught at NPS, RAND Graduate School, and USC

• “Real world” credentials
  – Former active duty naval officer
  – Senior Statistician specializing in survey and military research at the RAND Corporation

• Can find out more at http://faculty.nps.edu/rdfricke/
COL Appleget Professional Experience

• Academic credentials
  – Ph.D. in Operations Research, NPS
  – M.S. in Ops Research & Stats, Rensselaer Polytechnic Institute
  – B.S. from the United States Military Academy

• Teaching credentials
  – Taught at NPS since 2009

• “Real world” credentials
  – Retired active duty Army Colonel (30 years) with Army Operations Research tours:
    • OR Analyst, Center for Army Analysis 1989-1991
    • Director, TRADOC Analysis Center (TRAC)-Monterey 1999-2001
    • Deputy Director & Sr Military Analyst, TRAC-White Sands Missile Rg 2001-2004
    • Deputy Director & Sr Military Analyst, TRAC-Ft Leavenworth 2004-2006
    • Deputy Director, TRADOC Analysis Center 2006-2008
    • Army Irregular Warfare Modeling & Analysis Project Lead, 2008-2009

• Can find out more at http://faculty.nps.edu/jaappleg/
Class is All About Collecting and Analyzing Survey Data

• In this class you’ll learn:
  – How to design good survey questions and craft an effective survey instrument
  – About the trade-offs between various survey modes
  – The rudiments of sampling for surveys
  – Some statistical methods useful for analyzing survey data

• You’ll put these and the other statistical skills you’ve learned into practice doing a real-world survey project
Good Surveys Require Skills in Design, Sampling & Analysis
Also Requires Designing the Survey from Multiple Perspectives

Respondent’s Perspective
• Why should I take this survey?
  o Why is it worth my time?
  o Are the surveyors competent?
• Can I (easily) take the survey?
  o Are the questions clear?
  o Are there reasonable response to choose from?

Sponsor’s Perspective
• Will the survey answer my research objectives?
  o Are the necessary topics covered in the survey?
  o Are the right people being surveyed?

Analyst’s Perspective
• Given the questions, their responses, and the sample, are the sponsor’s questions answerable?
  o Are the questions (analytically) clear and do they map to the objectives?
  o Are the response sets clear and the categories mutually exclusive?
  o Is the difference between a neutral, no opinion, and don’t know response clear?

Good Surveys
Test Your Knowledge

• **True or false:** Longer surveys are better than shorter surveys because, by collecting more data from respondents, they’re cost efficient.

• **True or false:** If you have to survey in two different media (e.g., phone and web), using exactly the same question wording will ensure you get the same results.

• **True or false:** When designing a survey, it’s important to randomize the questions and change the response scales frequently to see whether the respondent is paying attention.
Test Your Knowledge – Part II

• *True or false*: The larger the population, the larger the sample size must be to get the same level of accuracy.

• *True or false*: With web-based surveys, it’s good practice to make all the questions mandatory to be sure respondents do not miss or fail to answer any questions.

• *True or false*: In order to increase response rates, it’s okay to tell respondents a survey is anonymous even if it isn’t.
Which Had a Larger Response Rate?

• Exactly the same web-based survey about “mobile learning devices” was conducted on two different populations:
  – USNA midshipmen via e-mail direction by a Navy commander
  – NPS students via e-mail request from Navy civilian

• One has a 70% response rate and the other a 25% response rate

• Which had the higher rate? Why?
If you take away nothing else from this class...

• ...take away this idea: High response rates depend on whether you to convince your respondents the survey is worth their time!
  – Clearly and convincingly communicate to them why taking the survey is in their best interests
    • “Why should I give a crap?”
  – Do a professional job and make sure it shows
  – Do your homework; minimize respondent burden
  – Only survey as many as you need and no more
  – Let respondents know you appreciate their time
Weekly Schedule

• Lectures: Mon, Tues, Wed, & Thurs 1000-1050 (Gl-113)
  – Designed to give you the background necessary to do the class project (and other surveys)
  – Can’t cover everything in class – must also do the reading to get all the details

• Lab: Friday, 1500-1650 (TEAL & Gl-113)
  – Some actual labs + work on class project
  – May or may not use all two hours depending on what we need to do for the course project
Course Schedule

Week 1: Introduction to Surveying
Week 2: Question and Instrument Design
Week 3: Evaluating Survey Questions
Week 4: IRB, Fielding Strategies
Week 5: Project Work, Interim Brief
Week 6: Sampling
Week 7: Sampling (cont’d)
Week 8: Postcollection Processing of Survey Data
Week 9: Basic Analytical Methods for Surveys
Week 10: Advanced Analytic Methods for Surveys
Week 11: Final Briefing
Sakai Course Site

- Course Information: syllabus, class & lab schedule
- Lectures: all the PowerPoint slides for the lectures
- Class Project: project schedule, background information and resources
- Survey Resources: everything you every wanted to know about surveying
  - ASA Series *What is a Survey?*
  - Good books about surveying
  - Examples of large-scale surveys
  - Major survey organization websites
  - Survey software, associations, journals, etc.
Tour of Course Sakai Site

OA4109: Survey Research Methods (WI13_RF)

Resources

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Entire site | Ronald Fricker | Dec 31, 2012 2:01 pm | 4 items
Entire site | Nam Nguyen | Jun 15, 2009 9:13 am | 1 item
Entire site | Ronald Fricker | Nov 19, 2011 7:34 pm | 0 items
Entire site | Nam Nguyen | Jun 29, 2009 2:16 pm | 8 items
Entire site | Ronald Fricker | Jun 26, 2012 7:31 pm | 26 items
Entire site | Nam Nguyen | Jun 26, 2012 6:15 pm | 5 items
Entire site | Nam Nguyen | Jun 29, 2009 2:04 pm | 6 items
Entire site | Nam Nguyen | Jul 2, 2009 4:50 pm | 8 items

Show other sites
Grading

• No homework or exams
• Grade based on class participation, particularly class survey project
  – Weekly reading assignments and class discussions
  – Some on-line (Sakai-based) quizzes
  – Participation in and successful completion of class survey project
• The good and bad news: Grading is entirely at our discretion
  – Come to class, engage, and put a good effort into the class and the project
Grading Criteria

• **Study and preparation efforts**
  
  – Clearly completed all readings and prepared for class; passed all quizzes; excellent comprehension of concepts and mastery of terminology (3 points)
  
  – Completed most readings and usually prepared for class; passed most quizzes; good comprehension of concepts and use of terminology (2 points)
  
  – Completed some readings; sometimes unprepared for class; adequate comprehension of concepts and use of terminology; passed some quizzes (1 point)
  
  – Failed to complete the readings; unprepared for class; little comprehension of concepts and poor use of terminology; did not pass any quizzes (0 points)
Grading Criteria, continued

- **Participation in class discussions and labs**
  - Very frequently participates (3 points)
  - Often participates (2 points)
  - Sometimes participates (1 point)
  - Rarely participates (0 points)

- **Involvement in class project**
  - Pro-actively involved, put forth significant effort (3 points)
  - Actively involved, put forth good effort (2 points)
  - Somewhat involved, put forth some effort (1 point)
  - Uninvolved or put forth little effort (0 points)

- **Grading**
  - 9 points = A, 8 points = A-, 7 points = B+, 6 points = B, etc.
Class Project

• Real-world survey design: Effective Use of Technology in the NPS Classroom
  – Conducted for CED-3 & ITACS
  – Of both NPS resident and non-resident students

• Deliverables:
  – Interim briefings: February 7th
  – Final briefing (to CED-3): Tuesday, March 18th

• More discussion and detail next two labs
  – See “Class Project” in Sakai for background information
Why Good Survey Methods Are Important

DOONESBURY

(YES?)

(HELLO, ELDER WHO IS REPUTED!)

(YES?)

(HELLO, ELDER WHO IS REPUTED!)

(EXCUSE ME?)

(I AM QUESTION-AKING FOR SURVEY OF INTELLIGENCE!)

(DO YOU SAY HELLO TO TALIBAN WITH ARMS THAT ARE SPREAD-EAGLED? OR ARE THEY HITTING THE PATH WHICH IS ASPHALT?)

(WELL...)

(WELL...) 

(WELL...) 

(WELL...)

(WHAT IS UP IN THE AIR WITH CORRUPTION? IS THERE A GOOD ODOR THAT IS AFOOT AND MAKING YOUR DAY?)

(DO YOU SAY HELLO TO TALIBAN WITH ARMS THAT ARE SPREAD-EAGLED? OR ARE THEY HITTING THE PATH WHICH IS ASPHALT?)

(WELL...)

(WELL...)

(WELL...)

(WELL...)

(WELL...)

(WELL...)

(DO YOU SAY HELLO TO TALIBAN WITH ARMS THAT ARE SPREAD-EAGLED? OR ARE THEY HITTING THE PATH WHICH IS ASPHALT?)

(YOUR PASHTO IS ATROCIOUS.)

(NO, THANKS, AS I AM PREFERING HAM!)
What We Have Just Learned

• Introduction to instructors and course
  – Be sure to read course syllabus and various schedules for the details!

• A little bit about the course project…more to come on during lab