



Health Science Department  
Health Science major  
**Fall 2018**

## **HAN 251.01: Research Methods in Health Science (3 credits)**

Day/Time: Friday, 1:00pm – 4:00pm  
Meeting Place: HSC Level 2, Lecture 2

Instructor: Dr. Zelizer  
SHTM, rm 418  
631-444-6158

Office hours: 11am-12:30pm and by appointment

### **Description:**

Course provides students with a strong foundation in quantitative, qualitative, and mixed methods research designs and methods. Emphasizes the relationship between the literature review and the research process, the elements of a research proposal, and applies research designs and methods to case study research projects. A required element of the course is the completion of the on-line CITI training in the protection of human subjects.

### **Course Goal:**

To introduce and develop a foundation of knowledge and skills in research methods and designs that will be applied during the senior year curriculum (i.e. students will be required to write a research proposal in the senior year).

**Behavioral Objectives:** Upon completion of this course, the student will be able to:

1. Demonstrate the ability to critique a peer-reviewed article.
2. Discuss the relationship between literature review and a research study.
3. Differentiate between quantitative and qualitative approaches in health science research.
4. Distinguish between a research purpose statement, problem statement, and research question.
5. Recognize when to use quantitative and qualitative approaches to answer research questions.

6. Identify independent and dependent variables.
7. Align research questions to appropriate designs and methodologies.
8. Compare strengths and limitations of each research design and method.
9. Analyze proposed research projects and determine the appropriate research design and research methods to utilize.
10. Distinguish various data collection methods.
11. Determine data analysis strategies based on data sets.
12. Explain the process and elements of informed consent.
13. Discuss ethical issues in clinical trials research with the implementation of the Institutional Review Board.
14. Synthesize the process of protecting human research subjects with the concept of good clinical practice in research.
15. Distinguish between culturally competent research and those research designs that are not culturally competent.

### **Required Textbook:**

Zelizer, D., McGoldrick, K., & Firestone, D. (2018). *Research Methods in the Health Sciences*. (Preliminary Edition). San Diego, CA: Cognella Academic Publishing.

Student Store: <https://store.cognella.com/82015-1A-003>.

**COURSE: HAN 251 | Research Methods in the Health Sciences**

**INSTRUCTOR(S): Deborah Zelizer**

**INSTITUTION: Stony Brook University**

**TEXT: Research Methods in the Health Sciences (Preliminary Edition)**

**PRINT PRICE: \$56.95**

**EBOOK PRICE: \$51.95**

### **Required reading:**

Bellur, S., Nowak, K.L. & Hull, K. S. (2015). Make it our time: In class multitaskers have lower academic performance. *Computers in Human Behavior*, 53, 63-70.

Doi.org/10.1016/j.chb.2015.06.027

Hobbs, C., Nahar, V. K., Ford, M. A., Bass, M. A., & Brodell, R. T. (2014). Skin cancer knowledge, attitudes, and behaviors in collegiate athletes. *Journal of Skin Cancer*, 1-7. doi:10.1155/2014/248198

### Articles for the critique assignments.

Article #1:

Hunter, A., Keady, J., Casey, D., Grealish, A., & Murphy, K. (2016). Psychosocial intervention use in long-stay dementia care: A classic grounded theory. *Qualitative Health Research*, 26(14), 2024–2034.

Article #2:

Greene, K. N., Gabrielyan, G., Just, D. R., & Wansink, B. (2017). Fruit-promoting Smarter Lunchrooms interventions: Results from a cluster RCT. *American Journal of Preventive Medicine*, 52(4), 451-458. doi:10.1016/j.amepre.2016.12.015

Article #3:

Andersson, M., Backman, H., Nordberg, G., Hagenbjork, A., Hedman, L., Eriksson, K. . . . Ronmark, E. (2018). Early life swimming pool exposure and asthma onset in children: A case-control study. *Environmental Health*, 17(34), e1-e10. doi:10.1186/s12940-018-0383-0

Article #4:

Hizo-Abes, P., Siegel, L., & Schreier, G. (2018). Exploring attitudes toward physician-assisted death in patients with life-limiting illnesses with varying experiences of palliative care: A pilot study. *BMC Palliative Care*, 17(1), e1-e10. doi:10.1186/s12904-018-0304-6

Assigned journal articles must be accessed through the Stony Brook University Library Database (part of the grade for the critiques is based on your ability to find the correct article)

- Go to the Stony Brook University Library Database
- Make sure you are logged into the network with your net ID and password
- Search the article title which is found under the required readings section of the syllabus
- Make sure the doi of the article you find matches the doi in the citation on the syllabus
- A link to a PDF version will usually be on the side so you can easily download the article to your computer.

**Required material:** Turning point clickers

**Teaching Strategies:** Lecture with student discussion  
Case studies  
Clicker questions  
Independent study

**Grading Scale: (there is no P/NC or G/P/NC grading option for this course; it must be taken for a letter grade)**

A (100 – 95)	A- (94-90)	B+ (89-87)	B (86-83)
B- (82-80)	C+ (79-77)	C (76-73)	C- (72-70)
D+ (69-67)	D (66-60)	F (< 60)	

A grade of C or better is required in this course to advance to the Health Science major's senior year curriculum. If a student withdraws from the course or does not earn the grade of C in the course, the student is only permitted two re-takes of the course.

After an unsuccessful third attempt the student must meet with a Health Science advisor to drop the Health Science major/change their major.

## Evaluation:

**Midterm** - 40%

**Final** - 40%

- Note: Students must write their name/id# on the paper test and return every page of the midterm and final exam at the conclusion of the exam. Only the answers notated on the scantron will be considered for grading. Students must bring #2 pencils, an eraser, their SBU ID card and highlighters with them for each exam.

**Homework and in-class individual and group assignments** - 10%

**CITI Homework** is worth 5% of the 10%

- The CITI web-based program is available at <http://www.citiprogram.org>
- Students must complete both trainings:
  - Human Subjects Protection in Social and Behavioral Sciences Course (Group 1 SBS)
  - The Responsible Conduct of Research (RCR) in Social and Behavioral Sciences Course.
- Additional information is posted on Blackboard under the **Document link**
- **Some homework assignments are in class assignments that must be submitted at end of the activity. Others are submitted at the beginning of the class session.** See the syllabus and Blackboard for additional information.

**Attendance and Participation** - 5%

- **Attendance** is mandatory and is only assessed via clickers
  - Your clicker will be the **ONLY** way in which your class attendance will be documented
    - **There will be NO sign in sheets if you forget your clicker or your batteries die**
      - Be sure to bring extra batteries to class in the event your battery dies
- Clicker points will be uploaded to Blackboard at the completion of each class session.

- It is **YOUR** responsibility to make sure that your clicker has been registered and that you are clicking in and sending a message. Should you have any problems with your clicker, please go to the Help Desk in the Melville Library.
- Students are **NOT** permitted to share clickers with other students **AND/OR** to click in for a student who is not in class.
- **Participation** is assessed by active engagement in class discussions, attentiveness and instructor observation of student interaction during small group work and clicker questions.

### **Critique of Journal Articles – 5%**

The required article and form to critique the journal article are posted on Blackboard under the **Assignments link**. This assignment must be typed double-spaced in Times New Roman, font 12 and a hard copy submitted during class. Failure to do so will result in a grade of zero for the assignment. **Late assignments, without an excused absence, will be accepted but are subject to a grade penalty.**

- Students will be randomly selected to present their critique to the class; all students are required to participate in the discussion.

### **Examination Policies**

Students may only have pencils, eraser, highlighters, and ID cards with them during the exam. During examinations, all electronic devices, books and notebooks, pocketbooks/knapsacks must be placed on the floor either in the front or back of the room. Students are not permitted to talk during exams unless they are given permission from their instructor. Sometimes, an exam will be proctored by a health science staff member who will be responsible for implementing the examination policies of the program. If a student is asked to move seats during an exam, s/he must comply.

All electronic devices including but not limited to cell phones, apple watches, and Fitbits must be turned off and stored in backpacks or on the podium. Meaning, these devices cannot be on your person during the exams.

It is the student's responsibility to make sure that all test questions have been answered prior to leaving the examination area. Students cannot review or make changes to exams once they have left the room in which the examination is being given. Students are required to return their scantron and all pages of the paper exam. **Only scantron answers will be considered for grading purposes.**

Students must complete the exam in the allotted time, students must turn in the exam when the instructor calls time. If a student refuses to turn in the exam/scantron (when the time instructor/proctor calls time) the student will be given the grade of zero for that exam.

Examinations will begin on time and any student arriving late will not be permitted to take the examination. Make-up examinations, without penalty, will be given to students with approved excused absence (i.e., medical emergency, conflict with west campus exam, etc.). For those

students with an excused absence, the make-up examination must be completed prior to the next class, if not the grade will be posted as a zero (0).

Students without an excused absence will be permitted to take a make-up exam **with grade penalty** (the highest grade the student can earn is a C). The examination must be completed prior to the next class, if not the grade will be posted as a zero (0). If you have a final examination conflict with a west campus course, a request for an alternate time or day needs to be submitted in writing to your professor with your final examination schedule and the specific course at least four weeks prior to the final examination.

**Please note: During exams, when you enter the room, please adhere to the following:**

1. The only items in your hand as you enter the room should be pencils, erasers, ID badge, and highlighters. All electronic devices (i.e., cell phones, smart watches, step trackers, Google glasses, etc.) must be put either at the front of the room or in your bag/backpack. *If you are found with an electronic device (cell phone, smart watch, step tracker, etc.) on your person during an exam it will be an automatic charge of academic dishonesty.*
2. Once you enter the room there will be no more talking!
3. All items (i.e., notes, cell phones, etc.) must be packed away before you enter the room. Before you take your seat, you must put your pocketbooks, backpacks, etc. at either the side of the room or the front of the room.
4. Find your seat number.
5. Do not turn exam over until you are instructed to (meaning, do not start filling out scantron, etc.).
6. Other information. If you are wearing a ball cap, the brim must be turned to 6 o'clock; if you wish to bring a drink to your seat it will be permitted but the faculty might ask to inspect the bottle/container; once the exam starts a student will not be permitted to leave the room and return (i.e., go to the rest room and then return to exam).

**All make-up exams (excused and unexcused) are given in an alternative format (i.e., short answer, fill in the blank, essay, etc.)**

### **Extra Credit:**

Please note there is no extra credit, extra assignments or additional work given or accepted to raise a student's grade.

### **Course Expectations:**

Attendance is mandatory. Attendance is determined solely by clicker participation. Attendance will be assessed multiple times during the class session. Participation is assessed by the instructor.

Respect for the instructor and fellow students throughout class is expected.

- Students must be on time.
- Cell phone ringers must be set to vibrate only.

- Students may be permitted to use their laptops or other electronic devices during classroom time for academic purposes only.
  - Checking email, surfing the web for entertainment purposes, etc. is not permitted and will negatively impact your participation grade.
- Professional behavior is expected at all times while in the Health Science Center.

### Procedure to Request an Excused Absence:

Excused absence petitions must be submitted in writing either 1) one week prior to an expected absence (i.e., court appearance, doctor visit, exam conflict with west campus course, etc.) or 2) no later than one week after an unexpected absence (i.e., death in family, surgery, medical emergency, car accident, etc.). Failure to follow this procedure will result in denial of the petition and negatively impact class attendance, participation and make up work including quizzes & exams. Proper documentation must accompany the request (i.e. court papers, doctor note). Note, missing class for personal and or family events (weddings, vacations, etc.) will not be excused.

Please Note: An excused absence does not excuse student from making up coursework and may impact the participation grade.

### Privacy of Course Material

When participating in social electronic communication (Twitter, You Tube, Facebook, Email, Text Messaging, CourseHero, etc.):

- A student assumes total responsibility for content (photos, comments, videos, etc.) and monitoring.
- Students are prohibited from photographing or video or audio recording any part of Health Science coursework unless they have permission from the course instructor.
- All academic materials (exams, assignments, student projects and presentations, case studies, lectures, etc.) are **confidential and must not be disseminated in anyway** unless the student receives approval from the department chairperson in writing.

<b>Course Outline</b>			
<b>Weekly outline is subject to change.</b>			
<b>Any change will be posted in the announcement section of Blackboard.</b>			
Location	Date	Topic	Reading: Assignments
L2/LH2	8/31/18	Introduction to Course: Methodology, Design, Methods  Overview of Health Science Research	Zelizer, McGoldrick, and Firestone (2018): Chapter 1  <b>Homework due:</b> turn in hardcopy, by the beginning of class, of your VARK assessment (write your name and ID on print out)

L2/LH2	9/7/18	Ethical Issues in Research	Chapter 2  <b>In class activity:</b> bring 2 hard copies of the ethical cases to class. One must be turned in at end of class; the other is to take notes on during the review of answers.
L2/LH2	9/14/18	Literature Review  Reading/critiquing journal articles	Chapters 3  <b>Assigned article:</b> Bring a hard copies of <b>Bellur, et al. (2014) and Hobbs, et al. (2014)</b> and bring a hardcopy of the journal critique form.
L2/LH2	9/21/18	Research Process  Problem statement Purpose statement Research questions Hypothesis	Chapter 4  <b>In class activity:</b> bring 2 hard copies of writing research questions worksheet to class. One must be turned in at end of class; the other is to take notes on during the review of answers.
L2/LH2	9/28/18	Using scripts to write QUAN/QUAL: Purpose statement Research questions  Internal/External Validity v. Trustworthiness Validity/ Reliability of Instruments	Chapter 4 & 5  <b>Assignment due: Submit hardcopy documentation of completion of CITI trainings (Basic and RCR)</b>
L2/LH2	10/5/18	Midterm review	
L2/LH2	10/12/18	Midterm Examination (2:00pm – 4:00pm)	Report at 2pm for 2 hour exam



L2/LH2	10/19/18	<p>Qualitative Research Designs Ethnography Grounded Theory Phenomenological Case Study</p> <p>Methods: Sampling, Data Collection, Data Analysis</p>	<p>Chapters 5 &amp; 6</p> <p><b>Article critique #1 due: Hunter et al. (2016)</b></p> <p><b>In class activity:</b> bring 2 hard copies of Tom Diner's activity.</p> <p>One must be turned in at end of class; the other is to take notes on during the review of answers.</p>
L2/LH2	10/26/18	<p>QUAL, continued</p>	<p><b>In class activity:</b> bring 2 hard copies of the mock data to class.</p> <p>One must be turned in at end of class; the other is to take notes on during the review of answers.</p>
L2/LH2	11/2/18	<p>Quantitative Research Designs</p> <p>Experimental and Quasi- Experimental Designs and Methods</p> <p>Solomon 4 group Pretest/Posttest Posttest only Within subject Simple time series Control group time series</p> <p>Methods: Sampling, Data Collection, Data Analysis</p>	<p>Chapters 5 &amp; 7</p> <p><b>Article critique #2 due: Greene et al. (2017)</b></p>
L2/LH2	11/9/18	<p>Quantitative Research: Descriptive/Non-experimental Designs/Methods</p> <p>Cohort Case-control</p>	<p>Chapters 5 &amp; 8</p> <p><b>Article critique #3 due: Andersson et al. (2018)</b></p>

		Observational Developmental Correlational  Methods: Sampling, Data Collection, Data Analysis	
L2/LH2	11/16/18	Quantitative Research: Survey Design/Methods  Methods: Sampling, Data Collection, Data Analysis	Chapters 5 & 9  <b>Article critique #4 due: Hizo-Abes et al. (2018)</b>  <b>In-class activity due:</b> bring 2 hard copies of survey worksheet to class. One of each must be turned in at end of class; the other is to take notes on during the review of answers.
	11/23/18	Thanksgiving Break: No classes in session.	
L2, LH 4	11/30/18	Mixed Methods Research  Convergent (parallel/concurrent) Explanatory Exploratory	Chapters 5 & 10
L2/LH2	12/7/18	Final examination review	
L2/LH2	12/14/18	FINAL (2pm-4pm)	Report at 2pm for a 2 hour exam. The final examination will be administered during the regularly scheduled class time.  If a student has a west campus final scheduled during this time, they must inform the instructor during the first 2 weeks of the semester, they will be given an alternative format make-up exam without penalty.

## Americans with Disabilities Act:

Americans with Disabilities Act/ Student Accessibility Support Center Statement: If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website: <http://www.stonybrook.edu/ehs/fire/disabilities>.

## Academic Integrity

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty, as per the SHTM Academic Policies and Procedures.

Since this is a HAN course, you will be held accountable to the academic dishonesty policies and procedures of SHTM. Please review the policies posted at <https://healthtechnology.stonybrookmedicine.edu/programs/hs/about/information/seniors>

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11. Do not turn exam over until you are instructed to (meaning, do not start filling out scantron, etc.).
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## Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and School of Medicine are required to follow their school specific procedures.

## **Blackboard**

Blackboard is a web-based course management system. Students will find all course documents and announcements on **Blackboard**. All currently registered students have blackboard user accounts. You will see this course listed when you log into Blackboard. Visit the website to access the class (your classes using blackboard will be listed). You will log in using your Net ID and your Password/your Stony Brook ID number. You should have received instructions at registration as to how to choose and set your Net ID, as this is identification you use to access Solar System as well. You are required to check **Blackboard** each week. While logged into **Blackboard**, students must check their personal information to ensure that the email address is current. You can access class information on-line at: <http://blackboard.sunysb.edu> For help or more information see: <http://www.sinc.sunysb.edu/helpdesk/docs/blackboard/bbstudent.php> For problems logging in: go to the helpdesk in the Main Library SINC Site or the Union SINC Site. You can also call: 631.632.9602 or email: [helpme@ic.sunysb.edu](mailto:helpme@ic.sunysb.edu)