



Graduate Seminar

Physics 599

Syllabus

Student Seminar:

Each student will prepare a talk of approximately 20 minutes in length on a topic in Nuclear Physics, Neutrino Physics, Particle Physics, Astronomy.

The web site is <https://you.stonybrook.edu/physics599>

Instructors:

1. **Jan C. Bernauer** (<https://you.stonybrook.edu/researchgroupbernauer/>)
2. **Kenneth Lanzetta** (https://www.stonybrook.edu/commcms/physics/people/_profiles/lanzettak)
3. **Xin Qian** (<https://www.bnl.gov/staff/xqian>)

Learning Objectives:

- Obtain experience in giving oral presentations.
- Learn some of what is happening in these fields.
- Learn about research activities at Stony Brook.
- Learn about presentation/clarity (attend colloquium).

Expectations:

1. Each student will give one approximately 20 minute talk, with 5 additional

- minutes to allow for questions and discussion during and after the talk.
2. You are required to provide an electronic version of the talk in PDF to be posted on the web page.
 3. Students must attend all talks; attendance will be taken
 4. Students are encouraged to ask questions and give criticisms of talks. Active participation will be part of the grade.

Preparing your talk:

- To prepare the talk you contact a local faculty expert. You **MUST** contact a faculty expert when preparing your presentation, ideally *at least 2 weeks* prior to your presentation. Contact information is available at the links above. Email typically works best. Then you should go back to this expert with questions about the material, and perhaps an outline of the talk *at least a week before your talk*.
- Instructors or experts should be consulted on the organization, layout, and content of your presentation at any time, but you will be solely responsible for the final product. Materials used in presentations should be drawn mostly from published materials (journal papers, preprints, etc.). Photos, figures, plots and other information can be obtained from web pages. However, students are strongly discouraged from directly using other people's transparencies, including those from an expert adviser.
- Make sure you have a goal with the presentation: present the essential physics, provide connections (previous data/theory), present the underlying concepts, and give a compact summary.
- Your fellow students must be able to learn something (new) from your presentation: make sure you start at a general level of knowledge.
- You are strongly encouraged to arrange a practice talk in front of fellow students a few days preceding their presentation. Practice the presentation: attitude, position, volume, speed, and timing!
- Make sure to stay close to the allotted time, but don't exceed the time limit. Be aware that if you speak for significantly longer than the allotted time, you may be interrupted and not be allowed to finish your presentation. This is a constraint that is consistent with the practices at many conferences.
- Make sure your talk is not too short.
- Avoid long and complex derivations; provide the essence or the outline of derivations if needed.

Grade:

- Physics content of the presentation: 50%
- Quality, and clarity of the presentation: 30%
- Active participation in class discussion 20%. Do not expect a grade A if you don't participate in class (i.e. if you don't ask questions during other students' talks).
We will keep track of those students who asked questions.
- Attendance will be taken. Unexcused absences will result in a lower grade. Any excuses (medical or otherwise) are to be discussed with the instructors and documented in a timely manner.
- We reserve the right to modify these grading percentages within reasonable limits

Course materials:

Contact your local faculty experts, they will recommend scientific articles to research your topic of choice. For electronic article access, try the university license to [APS Journals](#) (Physical Review) or the electronic preprint archive at [arXiv](#)); for searching published work in astronomy, the ADS abstract service and the arXiv preprint servers (<https://arxiv.org/archive/astro-ph>) are excellent. The Annual Reviews of Astronomy and Astrophysics (ARAA; <https://www.annualreviews.org/journal/astro>) are also an excellent source of background material. For particle and nuclear physics, the web sites of large experiments can be helpful in finding publications. For nuclear and particle physics the most commonly used search engine is [inSPIRE](#).

Student Accessibility Support Center Statement

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations 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 the Student Accessibility Support Center. For procedures and information go to the following website:

<https://ehs.stonybrook.edu/programs/fire-safety/emergency-evacuation/evacuation-guide-disabilities> and search Fire Safety and Evacuation and Disabilities.

Academic Integrity Statement

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 is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Professions, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

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 Student Conduct and Community Standards 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 the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook. If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.