

**PHY 3180, Nuclear Physics Lab
Winter 2021**

Instructor: Yuejian Wang	E-mail: ywang235@oakland.edu
Office: 164 Hannah Hall	Office phone: 248-370-3423
Class Time: F, 8:00 am – 12:00 pm	Office hours: by appointment
Auditorium: 074 MSC	

Dr. Rao Bidthanapally (Office: 270 HHS; Phone: 248 370 4872; Email: rao@oakland.edu) will give the necessary helps during the lab hours.

PROTECTING STUDENTS, FACULTY AND CAMPUS: IMPORTANT INFORMATION

Students must comply with the University mandated health protocols. For face-to-face classes, students must wear face coverings in the class and keep 6 feet apart from each other and from the professor.

See the [Return to Campus website](https://www.oakland.edu/return-to-campus/) for up-to-date information. (URL: <https://www.oakland.edu/return-to-campus/>)

Course Goals and Objectives:

This lab course is to help students understand the principle of nuclear physics as well as gain the experience in carrying out the scientific research by conducting a series of nuclear physics labs. During the lab, students will read the lab manuals, design the experiment, build the lab setup, do the data collection and analysis. Meanwhile, students will learn how to use the knowledge obtained from the nuclear physics class as well as from reference materials to investigate the phenomenon observed during the experiments.

Grading: Approximate report grading:

Introduction, goals, etc.	20%
Measurements, experiment	30%
Data processing, errors...	20%
Analysis of results	20%
Presentation	20%

Grading:

Lab 1:	20%
Lab 2:	20%
Lab 3:	20%
Lab 4:	20%
Lab 5:	20%

Grading Scale:

Final grade	Total grade	Honor points
A	96-100	4
A-	90-95	3.7
B+	85-89	3.3
B	80-84	3
B-	75-79	2.7
C+	70-74	2.3
C	65-69	2.0
C-	60-64	1.7
D+	55-59	1.3
D	50-54	1.0
F	< 50	0

We have to practice the social distancing protocol, so group consists of individual student.

Tentative schedule:

	Organization meeting
1/12	Lab 1
1/19	
1/26	Lab 2
2/2	
2/9	
2/16	Lab 3
3/2	
3/9	
3/16	Lab 4
3/23	
3/30	
4/6	Lab 5
4/13	

1	Radioactivity	SpecTec MCA	Gamma spectrum	Coincidence counter	Alpha absorption
2		Gamma spectrum	SpecTec MCA	Alpha absorption	Coincidence counter
3		Alpha absorption	Coincidence counter	Gamma spectrum	SpecTec MCA

Lab reports must be generated by computer. Handing writing report will be not accepted. Please send the PDF of lab report to ywang235@oakland.edu.

The reports are due at the beginning of new labs. The reports for the last lab are due on 4/19/19.

Add/Drops

The University's add/drop policy will be explicitly followed. It is the student's responsibility to be aware of the university deadline dates for dropping courses.

Reasonable Accommodations

Accessibility and Accommodations: It is the University's goal that learning experiences be as accessible as possible. Students with disabilities who have questions about course accessibility are encouraged to contact the instructor immediately. The Office of Disability and Support Services (DSS) is available to help. The DSS office is located in room 103A North Foundation Hall.

For more information, call 248-370-3266 or visit <https://www.oakland.edu/dss>

Policy on Academic Misconduct

The University's regulations that relate to academic misconduct will be fully enforced. Any student suspected of cheating and/or plagiarism will be reported to the Dean of Students and, thereafter, to the Academic Conduct Committee for adjudication. Anyone found guilty of academic misconduct in this course may receive a course grade of F, in addition to any penalty assigned by the Academic Conduct Committee. Students found guilty of academic misconduct by the Academic Conduct Committee may face suspension or permanent dismissal. The full policy on academic misconduct can be found in the General Information section of the Undergraduate Catalog.

Excused Absence Policy

The University excused absence policy applies to participation as an athlete, manager or student trainer in NCAA intercollegiate competitions, or participation as a representative of Oakland University at academic events and artistic performances approved by the Provost or designee.

For the excused absence policy, see:

<https://www.oakland.edu/provost/policies-and-procedures/>

Student Preferred Name/Pronoun Policy

Course rosters are typically provided to the instructor with the student's legal names. If you do not identify with the name that is listed with the Registrar's office, please notify me. I will gladly honor your request to address you by an alternate name or gender pronoun. For more information on indicating a preferred

first name on university records, please visit:
<https://www.oakland.edu/uts/common-good-core-resources/name-services/>

Bereavement Policy

In the event of the death of certain members within families or among loved ones, the University grants necessary bereavement absences upon student request. For the official bereavement policy, see:<https://www.oakland.edu/provost/policies-and-procedures/>