



UNIVERSITAS NEGERI YOGYAKARTA  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
DEPARTMENT OF PHYSICS EDUCATION  
**PHYSICS STUDY PROGRAM**

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**Bachelor of Physics**

**MODULE HANDBOOK**

|   |   |
|---|---|
| Module name:  | Seismology  |
| Module level, if applicable:                                | Undergraduate   |
| Code:   | FSK6270   |
| Sub-heading, if applicable:                                 | -   |
| Classes, if applicable:                                     | -   |
| Semester:   | 5 <sup>th</sup>   |
| Module coordinator:   | Khafidh Nur Aziz, M.Sc.   |
| Lecturer(s):  | Khafidh Nur Aziz, M.Sc.   |
| Language:   | Bahasa Indonesia  |
| Classification within the curriculum:                       | Elective Course   |
| Teaching format / class hours per week during the semester: | 100 minutes lectures ,120 minutes structured activities, and 120 minutes individual study per week.   |
| Workload:   | Total workload is 90,67 hours per semester which consists of 100 minutes lectures, 120 minutes structured activities, and 120 minutes individual study per week for 16 weeks.                 |
| Credit points:  | 2 SKS (3.25 ECTS)   |
| Prerequisites course(s):                                    | Vibration and Waves (FSK6316)   |
| Course Outcomes   | A. mastering the basics of seismology.<br>B. mastering earthquake mechanism.<br>C. analyze earthquake source mechanisms.<br>D. analyze different tectonic environments from focal mechanisms. |
| Content:  | This course discusses history and insight into seismology, seismological instrumentation, seismic waves, earthquake source mechanisms, and focal mechanism.                                   |

| Study / exam achievements: | The final mark will be weight as follow:  |                                    |  |                      |        |
|----------------------------|---|------------------------------------|--|----------------------|--------|
|                            | No  | CO                                 | Assessment Object                            | Assessment Technique | Weight |
|                            | 1   | CO1,<br>CO2,<br>CO3,<br>and<br>CO4 | a. Assignment<br>(Individual, Case<br>Study) | Written Test         | 50%    |
|                            |   |                                    | b. Mid                                       |                      | 25%    |
| c. Final Exam              |   |                                    | 25%  |                      |        |
| Total                      |   |                                    |  | 100%                 |        |
| Forms of media:            | Board, LCD Projector, Laptop/Computer   |                                    |  |                      |        |
| Literature:                | <p>A. Shearer, P.M. 2009. Introduction to Seismology 2nd Edition. Cambridge: Cambridge University Press.</p> <p>B. Aki, K. and Richards, P. G. (2002). Quantitative Seismology, 2nd edn, Sausalito, CA: University Science Books.</p> |                                    |  |                      |        |

### PLO and CO mapping

|     | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 | PLO6 | PLO7 | PLO8 |
|-----|------|------|------|------|------|------|------|------|
| CO1 |      | √    |      |      |      |      |      |      |
| CO2 |      | √    |      |      | √    |      |      |      |
| CO3 |      |      |      |      | √    |      |      |      |
| CO4 |      |      |      |      | √    |      |      |      |