UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS EDUCATION
**PHYSICS STUDY PROGRAM**
Colombo St. Number 1 Yogyakarta 55281
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Web: http://fisika.fmipa.uny.ac.id/, E-mail: fisika@uny.ac.id



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| Module name: | Liquid Crsytal |
| Module level, if applicable: | Undegraduate |
| Code: | FSK6358 |
| Sub-heading, if applicable: | - |
| Classes, if applicable: | - |
| Semester: | 3th |
| Module coordinator: | Dr. Supardi, S.Si., M.Si. |
| Lecturer(s): | Dr. Supardi, S.Si., |

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| | M.Si, Dr. Warsono, S.pd., M.Si |
| Language: | Bahasa Indonesia |
| Classification within the curriculum: | Elective Course |
| Teaching format / class hours per week during the semester: | 120 minutes lectures and 180 minutes structured activities per week. |
| Workload: | Total workload is 136 |

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| | hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes individual study per week for 16 weeks. |
| Credit points: | 3 sks (4.86 |

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| | ECTS ) |
| Prerequisites course(s): | - |
| Course Outcomes | After taking this course the students have ability to: CO1. Students are able to explain the |

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| | liquid crystal history, classification, structure of liqu |

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| | CO3. | quidcrystalsandmagneticfieldsonliquidcrystals. Stud |

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| | e<br>n<br>t<br>s<br>a<br>r<br>e<br>a<br>b<br>l<br>e<br>t<br>o<br>e<br>x<br>p<br>l<br>a<br>i<br>n<br>t<br>h<br>e<br>a<br>p<br>p<br>l<br>i<br>c<br>a<br>t<br>i<br>o<br>n<br>o<br>f<br>l<br>i<br>q<br>u<br>i<br>d<br>c<br>r<br>y<br>s<br>t<br>a<br>l<br>s<br>i |

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| | CO4. Students are able to explain the types and various fields. |

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| | properties of Liquid Crystal Polymers and their application |

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| | n s i n e v e r y d a y l i f e . . |
| Content: | This course studies liquid crystals, including the classification and structure of liquid crystals, the regularity and symmetry of materials, the influence of electric and magnetic |

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| | fields on liquid crystals, the application of liquid crystals in various fields, and liquid crystal polymers. |
| Study / exam achievements: | Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically |

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| | every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the |

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| | final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.<br><br>The final mark will be weight as follow:<br><br>**No** \| <br>1 \| C C ar C |

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| Forms of media: | Board, LCD Projector, Laptop/Computer, online |
| Literature: | 1. |

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

**PLO and CO mapping**

## Physics Study Program's PLO

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| **PLO1** | To show personal characters based on social ethics and academic responsibility |
| **PLO2** | To master the concepts of classical and modern physics |
| **PLO3** | To be able to use mathematical, computational, and experimental methods in understanding physical concepts |
| **PLO4** | To use operational knowledge of physics to carry out research in applied physics |
| **PLO5** | To analyze physical phenomena using mathematical, computational, and experimental methods to obtain mathematical or empirical models of the phenomena |
| **PLO6** | To be able to use instrumentation skills to solve physical problems |
| **PLO7** | To be able to communicate and disseminate the knowledge and research in the field of physics |
| **PLO8** | To be able to collaborate in scientific and social community |