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|---|--|---|--------------|----------------------------|-------------------|----------|-------|-------|
| Course No. | 430.423 | Lecture No. | 001 | Course Title (Subtitle) | Optoelectronics | Credit | 3 | |
| Representative Instructor | Name | Changhee Lee (post : Part-Time Lecturer) | | Homepage | oled.snu.ac.kr | | | |
| | E-mail | chlee7@snu.ac.kr | | Phone No. | 02-880-9093 | | | |
| | Interview Time/Place : Tue/Thu. 12:15-12:30 (301-103) | | | | | | | |
| Attachment | (Korean) | | | | | | | |
| | (English) | | | | | | | |
| Prerequisite Course | | | | | | | | |
| *1.Purpose of Course | In this course, the basic principles of optics and lasers are taught and their applications are explained. The basic principle of optical communication, optical measurement, and display optics will be described. Topics include fundamental principles of electromagnetic waves and optics, basic principles of lasers and semiconductor optoelectrical devices. principles of optical communications and electronic displays, etc. Recent advances in metamaterials and nanophotonics, plasmonics will be also briefly introduced. | | | | | | | |
| *2.Materials and Reference | G. R. Fowles, Introduction to Modern Optics, 2 nd ed., Holt, Rinehart, and Winston, New York, USA, 1975. Reference: B. E. A. Saleh and M. C. Teich, Fundamentals of Photonics, 2 nd ed., JohnWiley & Sons, New York, USA, 2007. | | | | | | | |
| *3.Evaluation Method | Attendance | Task | Medium | Final | Random Evaluation | Attitude | Other | Total |
| | 0 | 10 | 60 (2 times) | 40 | 0 | 0 | 0 | 100 |
| | Remark of Others | | | | | | | |
| *4.Lecture Plan | 1st week: Introduction, Chapter1. The propagation of light 2nd week: Chapter2. The vectorial nature of light 3rd week: Chapter2. The vectorial nature of light 4th week: Chapter3. Coherence and interference 5th week: Chapter3. Coherence and interference, Chapter4. Multiple-beam interference 6th week: Chapter4. Multiple-beam interference, Medium 1 7th week: Chapter5. Diffraction 8th week: Chapter5. Diffraction 9th week: Chapter6. Optics of solids 10th week: Chapter6. Optics of solids, Medium 2 11th week: Chapter8. Optical spectra 12th week: Chapter9. Amplification of light. Lasers 13th week: Chapter9. Amplification of light. Lasers 14th week: Saleh and M. C. Teich, Chapter 17. Semiconductor Photon Sources 15th week: Saleh and M. C. Teich, Chapter 18. Semiconductor Photon Detectors, Final | | | | | | | |
| 5.References to Course Registration | | | | | | | | |