

# 4 Year Curriculum of Electro-Optical Engineering

## Freshman Year

Category	Course	Fall/ Spring	Credit	Required / Elective
	English ( I )	Fall	3	Required
	Physical Education (Physical Fitness)	Fall	0	Required
	Chinese ( I )	Fall	3	Required
	Manual Training ( I )	Fall	0	Required
	Digital Logic Circuits	Fall	3	Required
	General Physics ( I )	Fall	3	Required
	General Physics Lab ( I )	Fall	1	Required
	Introduction to Electro-Optical Information	Fall	3	Required
	Calculus ( I )	Fall	4	Required
	English ( II )	Spring	3	Required
	Physical Education (Swimming for Beginners)	Spring	0	Required
	Chinese ( II )	Spring	3	Required
	Manual Training ( II )	Spring	0	Required
	Electric Circuits	Spring	3	Required
	General Physics ( II )	Spring	3	Required
	Optics ( I )	Spring	3	Required
	General Chemistry	Spring	3	Required
	General Physics Lab ( II )	Spring	1	Required
	Calculus ( II )	Spring	4	Required
<b>College</b>	Grand View on Robot	Spring	2	Elective
<b>Main</b>	Computer Programming and Applications	Spring	3	Elective
	Digital Logic Circuits Lab	Spring	1	Elective

## Sophomore Year

Category	Course	Fall/ Spring	Credit	Required / Elective
	Physical Education ( III )	Fall	0	Required
	Historical Thinking	Fall	2	Required
	Engineering Mathematics ( I )	Fall	3	Required
	Optics Lab ( I )	Fall	1	Required
	Optics ( II )	Fall	3	Required
	Electronics ( I )	Fall	3	Required
<b>Main</b>	Introduction to Optical Information Instruments	Fall	3	Elective
	Vacuum Coating Lab	Fall	1	Elective
<b>Main</b>	Principles of Vacuum System and Optical Coating	Fall	3	Elective
	Advanced Electric Circuits	Fall	3	Elective
	Optical Component Fabrication and Testing	Fall	3	Elective
	Physical Education (IV)	Spring	0	Required
	Democracy and Law	Spring	2	Required
	NUU Lectures	Spring	2	Required
	Engineering Mathematics ( II )	Spring	3	Required
	Electronics Lab ( I )	Spring	1	Required
	Optics Lab ( II )	Spring	1	Required
	Optical Design	Spring	3	Required
	Electronics ( II )	Spring	1	Required
<b>Main</b>	Applied Optics	Spring	3	Elective

## Junior Year

Category	Course	Fall/ Spring	Credit	Required / Elective
	Electronics Lab ( II )	Fall	1	Required
	Modern Physics	Fall	3	Required
	Electromagnetics ( I )	Fall	3	Required
	Engineering Mathematics ( III )	Fall	3	Required
	Introduction to Laser Principles	Fall	3	Required
<b>Main</b>	Optical Fiber Communication	Fall	3	Elective
	Principles of Fiber Optic Devices	Fall	3	Elective
	Principles of High Frequency Circuit Design	Fall	3	Elective
	Holography	Fall	3	Elective
<b>Main</b>	Numerical Analysis	Fall	3	Elective
<b>Main</b>	Electronics ( III )	Fall	3	Elective
	Interference Optical	Fall	3	Elective
<b>Main</b>	Principles of Electro-Optical Measurement and Application	Fall	3	Elective
	Functions of Complex Variables	Fall	3	Elective
	Introduction to Optical Information Processing	Fall	3	Elective
	Student Project ( I )	Spring	1	Required
	Electromagnetics ( II )	Spring	3	Required
	Introduction to Semiconductor Physics	Spring	3	Required
	Laser Fundamentals and Applications Lab	Spring	1	Required
	Thin Film Optics	Spring	3	Elective
<b>Main</b>	Electro-Optic Material and Devices	Spring	3	Elective
	Radiometry, Photometry Colorimetry and Applications	Spring	3	Elective
	Signal and System	Spring	3	Elective
	Optical Instruments	Spring	3	Elective
	Laser Physics	Spring	3	Elective
<b>Main</b>	Electro-Optical Signal Processing	Spring	3	Elective
	Principles of Laser Micro-Machining	Spring	3	Elective
<b>Main</b>	Principles of Flat Panel Display	Spring	3	Elective
<b>Main</b>	Optical Fiber Communication Projects	Spring	3	Elective
	Principles of Programming for Interface Control	Spring	3	Elective

## Senior Year

Category	Course	Fall/ Spring	Credit	Required / Elective
	Student Project ( II )	Fall	1	Required
<b>College</b>	Factory Practice ( I )	Fall	3	Elective
	Image Processing	Fall	3	Elective
	Introduction to Biophotoic Technology	Fall	3	Elective
	Laser Therapy Fundamentals and lab	Fall	3	Elective
	Introduction to Semiconductor Fabrication	Fall	3	Elective
	Optical High Polymer Material	Fall	3	Elective
	Principles of Optical Data Storage	Fall	3	Elective
	Gas Laser Manufacturing	Fall	3	Elective
	Introduction to Liquid Crystal	Fall	3	Elective
<b>Main</b>	Photovoltaic Battery	Fall	3	Elective
	Semiconductor Physics and Devices	Fall	3	Elective
<b>Main</b>	Solid state Lighting	Fall	3	Elective
<b>Main</b>	Practical Training in Electro-Optic Industry ( I )	Fall	3	Elective
<b>College</b>	Engineering Ethics	Spring	2	Elective
<b>College</b>	Technology and Humanities	Spring	2	Elective
<b>College</b>	Technology and Management	Spring	2	Elective
<b>College</b>	Practice of IC Testing	Spring	3	Elective
<b>College</b>	Science English Writing	Spring	3	Elective
<b>College</b>	Low Carbon Life	Spring	2	Elective
<b>College</b>	Factory Practice ( II )	Spring	3	Elective
	Principles of Opto-Electronics	Spring	3	Elective
	Principles of Digital Camera and Applications	Spring	3	Elective
	Introduction to Integrated Optics	Spring	3	Elective
	Technology of Liquid Crystal Display	Spring	3	Elective
	Introduction to Display Fabrication and Design	Spring	3	Elective
	Introduction to Thin Film Transistors	Spring	3	Elective
	Student Project ( III )	Spring	1	Required
<b>Main</b>	Practical Training in Electro-Optic Industry ( II )	Spring	3	Elective

**※Graduation qualification :**

1. Graduates must be qualified by GEPT intermediate first test, or other equal ranking of the examinations (international or domestic) which are approved by the government institute (international or domestic).  
Without the above qualifications, the students will be requested to get a verification from NUU language center counseling course.
2. Limited 2 Credits for the military training course.
3. Graduation Credits : At least 131 Credits.
4. The Main Elective Course : At least 27 Credits.
5. The Main Elective Course below : 「 Computer Programming and Application 」 、 「 Introduction to Optical Information Instruments 」 、 「 Applied Optics 」 、 「 Principle of Vacuum Coating Technology 」 、 「 Electronics (Ⅲ) 」 、 「 Optical Fiber Communication 」 、 「 Optical Fiber Communication Projects 」 、 「 Electro-Optic Material and Devices 」 、 「 Electro-Optical Signal Processing 」 、 「 Principles of Flat panel Display 」 、 「 Numerical Analysis 」 、 「 Principles of Electro-Optical Measurement and Application 」 、 「 Solid state Lighting 」 、 「 Photovoltaic Battery 」 、 「 Practical Training in Electro-Optic Industry(Ⅰ)(Ⅱ) 」 , At least 15 Credits.
6. The Credits of the courses: 「 Introduction of Metal Materials 」 、 「 Glass Technology 」 、 「 Phase Transformation 」 、 「 Ceramic Processing 」 、 「 Analysis of Materials 」 、 「 Thin Film Technology 」 in Department of Materials Science and Engineering of NUU are also available.
7. Limited 2 Credits for the physical education.
8. The College Elective Course: At least 2 Credits.