Stokes analysis of an optical system[1] GEORGI GEORGIEV, Assumption College, THOMAS SLAVKOVSKY, Asumption College, ASSUMPTION COLLEGE TEAM — As a transfer from research to teaching we are using stokes analysis to represent changes in the vectors for polarization of light as acted upon by the matrices of optical elements in undergraduate physics lab. The goal is to integrate students' knowledge for matrix analysis with an experimental determination of the changes in the polarization of light. This method allows students to learn how to design an optical system by using mathematical analysis, a skill necessary for future scientists or engineers in the fields of optics. We have tested and implemented the lab. The results are that it is well accepted by the students, but is very involved computationally, and needs to be shortened. The Stokes analysis needs to be introduces earlier in the curriculum in order to make the students comfortable with the formalism.

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