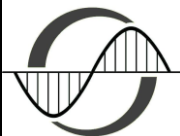




UNIVERSITÀ
degli STUDI
di CATANIA



DIPARTIMENTO DI FISICA E ASTRONOMIA
“ETTORE MAJORANA”

DOTTORATO DI RICERCA IN FISICA
CICLO XLI A.A. 2025/2026

Optical design with Raytracing

2 CFU

Teaching staff

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Reception hours: Mon 11-13

Program of the course:

The course is an introduction to the design of optical systems with the use of raytracing codes

- Review of Gaussian optics
- Third-order optics and Aberration
- Optimization
- Tolerancing
- Multiconfiguration
- Macros & API
- Non-sequential systems / Straylight

Bibliography:

- Kingslake - Lens design fundamentals, SPIE Press, 2010
- Fischer / Tadic-Galeb - Optical System Design, McGraw Hill, 2000
- Geary - Lens Design with practical Examples, Willmann-Bell, 2002
- Fest - Stray Light Analysis and Control, SPIE Press, 2013 her