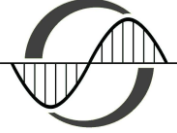




UNIVERSITÀ  
degli STUDI  
di CATANIA



DIPARTIMENTO DI FISICA E ASTRONOMIA  
“ETTORE MAJORANA”

DOTTORATO DI RICERCA IN FISICA  
CICLO XL A.A. 2024/2025

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## Optical design with Raytracing

2 CFU

### Teaching staff

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**Reception hours:** Mon 11-13

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### 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