

## MATHEMATICS–3H

<b>Project code:</b>	CDC2
<b>Project title:</b>	Rainbows
<b>Supervisor:</b>	Dr. C. D. Coman
<b>Subject area:</b>	Physics
<b>Prerequisites:</b>	Calculus & Trigonometry
<b>Summary:</b>	The project looks at understanding the origin of rainbows and some of their important characteristics.

### PROJECT DETAILS

The aim of the project is to learn about

- The life and work of Fermat and Descartes,
- Snell's Law and the Principle of Least Time,

and find mathematical explanations for the following questions

- Why do rainbows appear in circular arcs in the sky?
- What does it mean that "*the rainbow is in the eye of the beholder*"?
- Why is the rainbow multicoloured?



A handout that contains some useful hints for tackling some of the above will be given to the students taking this project.