

# Forest and Hillslope Hydrology

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## Contents

This course will provide an introduction to physical hydrology and geomorphology of forested watersheds with an emphasis on managing forest resources and the effects of land use, climate topography on hydrological processes.

Management will focus on forested watersheds for the control of the amount and timing of water yield, stormflow and sedimentation through the examination of water and sediment budgets, riparian systems, and hillslope/watershed hydrological processes.

# Course format

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- Lectures from Monday to Thursday
- PDF copy of the lectures will be available 2 days before the day.
  - Read the material before lecture
  - Make your print and take notes
  - Problems and questions (use of calculator during lectures!)
- Sections on Tuesday & Wednesday
  - Discussion of lectures and readings

# Course organisation

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- 21 Oct - 7 Nov
- 21 Oct - 14 Nov: FES
- Technical field visit: Thursd Oct 31, afternoon

# Web site

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# Availability of help

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- Ask questions in class. A favor to classmates
- Participate in lab discussions. Practice professional problem-solving roles.
- Office hours
  - Marco Borga: Tues & Thurs 4-5 pm;
  - By e-mail
- Marco Borga: [marco.borga@unipd.it](mailto:marco.borga@unipd.it)
- Daniele Penna: [daniele.penna@unipd.it](mailto:daniele.penna@unipd.it)

# Assessment: the grad

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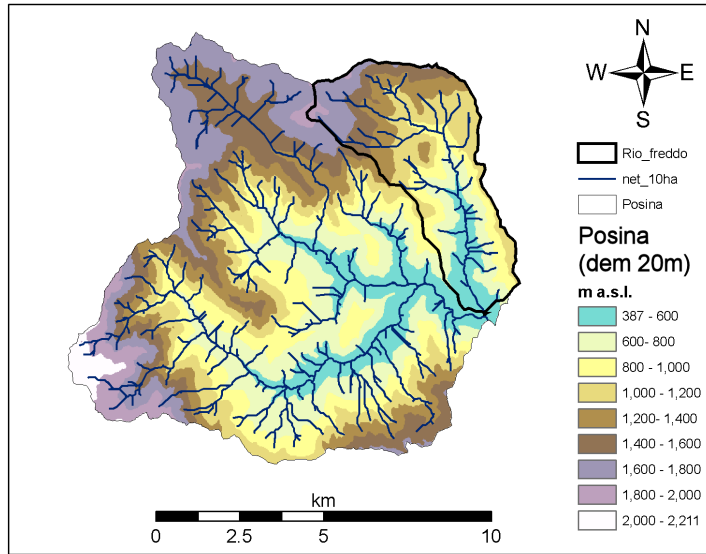
## Three steps:

- Report (assessment of evaporation, transpiration and interception rates for forested surfaces in the Posina basin)
- Written Examination
- Oral Examination

## The course will provide:

- Examples of written exams;
- Check list of oral questions.

# The problem: assessment of evaporation, traspiration and interception rates for forested surfaces in the Posina basin



Posina river basin



# Forest Hydrology: Examen

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## Contents

- Examples of written ex.
- Check list.



# Supplementary Text

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Bras, R.L., Hydrology: An Introduction to Hydrologic Science, Addison Wesley, Reading, Mass., 1990.

Eagleson, P.S., Dynamic Hydrology, McGraw-Hill, Inc., New York, 1970.

Hornberger, G.M, Raffensperger, J.P, Wilberg, P.L., and Eshleman, K.N., 1998, Elements of Physical Hydrology, John Hopkins Univ. Press, Baltimore, Maryland, 302 p.

Viessman, Jr., W., G.L. Lewis, and J.W. Knapp, Introduction to Hydrology, Harper and Row, New York, 1989.

Gleick, P.H., Water in crisis. A guide to the world's freshwater resources. New York/London, Oxford University Press. 474 pp. 1993.

Dingman, S.L. 1993. Physical Hydrology. Prentice-Hall Inc. 575 p.