

Department of Civil Engineering 2014 Summer Semester Ryo Masahiro (invited lecturer), Yoshimura Chihiro

Aquatic Environmental Science

## Outline #3: Watershed hydrology

- 1. Sustainability of Urban Water Environment
- 2. General Introduction of Hydrology
  - Historical and social background of hydrology
  - Definition of hydrology and watershed
  - Latest trend in hydrological research
  - Hydrological cycle at global and watershed scales
  - Water balance
  - Stream flow variability and human impacts
- 3. Hydrological Modeling
  - System transformation and basic theorem
  - Process-based approach
  - Classification of hydrological models
  - History of hydrological models
  - What's the state-of-the-art?
- 4. Exercise

24 Apr. 2014