

Department of Civil and Environmental Engineering  
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## Aquatic Environmental Science

### 5. pH and Redox potential

1. Basic Analytical Chemistry
    - Units for water quality assessment
    - General procedure for determining solute concentrations
  2. Acidity of Water
    - Definition of pH
    - Equilibrium constant
    - pH in natural waters
    - Calculation of pH
  3. Dissolved Oxygen
    - Oxygen availability
    - Solubility of oxygen
    - Saturation of dissolved oxygen
  4. Oxidation and Reduction
    - Definition of oxidation and reduction
    - Oxidant and reductant
    - Redox potential (ORP,  $E_h$ )
    - pE-pH diagram
    - Chemical equilibrium model
  5. Exercise
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