Contaminants of emerging concern constitute a group of toxicants that is, as the name implies, receiving increasing attention. The risks posed by more classic toxicants, such as metals, fossil fuel combustion by-products, solvents, and pesticides are well known, and regulations to minimize their risks are well-established. As a society, we can, therefore, successfully prevent much neural, renal, pulmonary, and hepatic disease and reduce the occurrence of cancer and birth defects due to toxicants.

At the same time that classic toxicants have been brought to heel by advancements in knowledge and resulting legislation, there has been an increase in both the number of substances to which consumers are exposed and the awareness of the potential ill effects of these substances. Once our personal care products consisted of a bar of soap; now we have separate cleansers for face and body, shaving gel, and at least three products for keeping our hair looking great. Prescription medication use has increased as we seek to clear our skin, control our reproduction, and reduce our cholesterol. Our food contains antibiotics, steroids, and preservatives. And, where once we had containers of glass, they are now largely made of plastic.

Substances associated with all of these products are coming under increasing scrutiny by scientists, regulators, and the public, yet are largely unregulated. We are becoming aware that these substances are either having unintended effects or, in the case or medications, having their effects on unintended populations.

This course will take well-qualified students through the classes of contaminants of emerging concern (CECs) in a format in which students discuss previously-assigned papers and research a CEC of their choice from cradle-to-grave.

Prerequisite: ENVS 120A
Text: none but…
Papers will be assigned weekly; links to these will be posted to GauchoSpace.

Course Objectives:
- Practice reading the scientific literature
- Learn fundamental concepts re: CECs
- Learn basic facts re: CECs
- Observe, learn, and practice problem-solving skills
- Practice researching scientific topics and presenting findings

Tentative Topics in Tentative Order of Appearance:
- Class 1: The case of the transsexual molluscs
- Class 2: Intro
  - CEC definitions and categories
- Classes 3-4: Continue definitions and categories
- Classes 5-6: Antibiotic resistance
- Classes 7-8: Legal and Not: Drugs
- Class 9: So what IS a CEC?
- Class 10: Midterm
- Class 11: The cases of cows getting into things they shouldn’t
- Classes 12-14: What regulations affect them?
  - Toxicity
- Classes 15-18: Endocrine Disruption
- Class 19: WWTP
- Class 20: Presentations

Grading:
- 10% attendance
- 15% mid-term exam
- 15% second half exam Wednesday, June 13 @ 8
- 50% homework assignments and responses to weekly readings
- 10% cradle-to-grave written or oral presentation on a CEC of your choice