

## **BIOLOGY 3711 WA – PATHOGENIC BACTERIOLOGY**

**DR. K. LEUNG**

Lecture: 8:30 - 10:00 am, Tuesday and Thursday. AT-2021

Office Hours: Tuesday 11:00 - 12:00 am or by appointment.

### Outline of topics

1. Introduction
2. Approaches and methods in studying bacterial diseases.
3. First line of defense against bacterial infections.
4. Second line of defense against bacterial infections.
5. Vaccination.
6. Bacterial strategies against the human immune system.
7. Bacterial Exotoxins.
8. Antimicrobial compounds and antibiotic resistance.
9. Selective bacterial pathogens:
  - *E. coli*
  - Food-borne pathogens: *Salmonella*, *Listeria* and *Campylobacter*.
  - *Staphylococcus*, *Streptococcus* (*Enterococcus*) and *Streptococcus pneumoniae*
  - *Pseudomonas aeruginosa* and related species
  - Sexually transmitted bacterial infections: *Neisseria*, *Chlamydia* and *Treponema pallidum*
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### Examinations

Quizzes: 17/1, 24/1, 31/1, 14/2, 28/2, 6/3, 27/3, and 4/4.

Two mid-term exams: Feb. 5 (Tuesday) and March 13 (Thursday).

Final exam: TBA

Dropping day: March 10

Weekly quizzes are on Thursday (total of 20%). There will be two mid-term exams and each is worth 25%. The final will be 30% and will cover materials in the whole course.

### Textbook

Salyers and Whitt. 2002. Bacterial Pathogenesis: A molecular approach (2<sup>nd</sup> Edition). ASM Press, Washington, D.C.