

98 學年度 第二學期 LS384200 課程表 (Syllabus) :

| Week/ Date | Topics | Instructors |
|------------|--|-------------|
| 1 | 2/23 Check-in & Organization (1) finger-touching experiment (2) collection of soil sample | Lan |
| 2 | 3/02 Aseptic technique & Microscopy (1) Streak/Plating Plates and liquid culture inoculation | Lan |
| 3 | 3/09 Electron microscopy (I) (1) TEM introduction (2) Sample preparation (3) Sample examination & size measurement | Lan |
| 4 | 3/16 Electron microscopy (II) Flagella observation by TEM | Lan |
| 5 | 3/23 Bacterial staining (1) Simple staining (2) Gram staining (3) Negative staining (4) Spore staining | Lan |
| 6 | 3/30 <u>The 1st report due</u> Bacterial growth (1) Evaluation of bacterial growth by measuring turbidity (2) Serial dilution-agar spread plating procedure to quantitate viable bacterial cells | Kao |
| 7 | 4/06 Bacterial biochemical activities (1) Urease Test (2) Catalase test (3) Oxidase test Extracellular enzymatic activities (4) Starch Hydrolysis test (5) Casein Hydrolysis test (6) IMViC test | Kao |
| 8 | 4/13 API (Analytical profile index) 20E | Kao |
| 9 | 4/20 The bacterial viruses: bacteriophages (1) Cultivation & enumeration of bacteriophages (2) Isolation of coliphages from water | Kao |
| 10 | 4/27 Microbiology of food (1) Yoghurt (2) Water test | Kao |
| 11 | 5/04 <u>The 2nd report due</u> Antimicrobial activity ginger/garlic/onino/Amp/Kan | Yin |

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| 12 | 5/11 | Competent Cells & Transformation Blue/White Screening: pGEM-T vector | Yin |
| 13 | 5/18 | Plasmid Extraction (Boiling lysis mini-prep) & Agarose Gel Electrophoresis | Yin |
| 14 | 5/25 | AGI (agarose gel immuodiffusion) antigens antiserum | Yin |
| 15 | 6/01 | HA (Haemagglutination) & HI (Haemagglutination Inhibition) tests new castle disease virus (NDV) 5% suspension of chicken RBC | Yin |
| 16 | 6/08 | <u>The 3rd report due</u> Final examination ; Cleaning and check-out | Lan, Kao, Yin |