

## **UTOP 2910 Pathways to Teaching for Future Educators - Spring 2025**

### **Course Instructor**

**Ms Phoebe MOK**, Education Development Manager, Undergraduate Core Education Team, Academy of Interdisciplinary Studies (AIS)

### **Guest Instructors**

**Prof Andrew HORNER**, Professor, Department of Computer Science and Engineering (CSE);  
**Prof Arthur LAU**, Associate Professor of Interdisciplinary Education, Division of Environment and Sustainability (ENVR);

**Prof Desmond TSOI**, Associate Professor of Engineering Education, Department of Computer Science and Engineering (CSE);

**Prof Kenneth LEUNG**, Associate Professor of Engineering Education, Department of Computer Science and Engineering (CSE);

**Prof Jeevan JAISINGH**, Associate Professor of Business Education, Department of Information Systems, Business Statistics and Operations Management (ISOM) and

**Prof Marshal LIU**, Associate Professor of Engineering Education, Department of Chemical and Biological Engineering (CBE)

### **Course Description**

This course is designed to provide undergraduate students with a unique and real-life teaching experience. Through pre-teaching training, consultation sessions, reflection sessions, and a mini teaching conference, students will acquire important knowledge and practice core competencies essential for teaching. The course aims to help students design, implement, and evaluate appropriate learning, teaching, and assessment strategies to cater to learners' individual learning differences. Students will learn to identify and address educational issues by adopting appropriate strategies to arouse learners' interest. Additionally, students will learn to reflect on and make reasoned analysis on their teaching. Upon completion of this course, students will be equipped with the necessary skills to accurately and effectively explain subject knowledge to learners and practice effective pedagogical instructions.

### **Course ILOs**

Upon completion of this course, students are expected to be able to:

- explain the subject knowledge accurately and effectively to learners
- design, implement and evaluate appropriate learning, teaching and assessment strategies to cater for the learners' individual learning differences
- identify and address educational issues by adopting appropriate strategies to arouse learners' interest
- reflect on and make reasoned analysis on one's teaching

### **Course Highlights**

- The course is structured around four basic components: Pre-teaching training, consultation sessions, actual teaching, and teaching conference.

- Students will be given opportunities to design their teaching materials which will be taught to a group of secondary school students.

#### Course logistic:

- Target group of high school student is Year 9 (F3).
- Target number of UG students per group is 3 to 4.
- The tentative actual teaching days (26 Apr and 3 May) will be half day with all students teaching simultaneously for two 1.5-hour sessions.
- We encourage students to adopt innovative pedagogies such as Blended Learning and/or Experiential Learning if the topic is suitable.

#### Required Reading

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). How learning works. John Wiley & Sons.

#### Assessment

| Item | Task                                                                                                                                                                                                                                 | Due Date                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>Actual teaching (60%)</b> <ul style="list-style-type: none"> <li>• Rehearsal of teaching (10%)</li> <li>• Actual teaching sessions to secondary school students (x2) (40%, 20%@)</li> <li>• Response to feedback (10%)</li> </ul> | <ul style="list-style-type: none"> <li>• Rehearsal of teaching (week 11)</li> <li>• Actual teaching sessions (26 Apr &amp; 3 May, both Saturdays)</li> </ul> |
| 2    | <b>Learning portfolio (30%)</b>                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Week 14</li> </ul>                                                                                                  |
| 3    | <b>In-class participation (10%)</b>                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• N/A</li> </ul>                                                                                                      |

#### Course Schedule

| Week | Date         | Topic/Activity                                                                                                           | Brief Outline                                                                                                                                                      |
|------|--------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Feb 5 (Wed)  | Lecture #1: Introduction of UTOP, Faculty Sharing (Prof Prof Jeevan JAISINGH, Prof Arthur LAU, Prof Marshal LIU, Phoebe) | Introduction of UTOP.                                                                                                                                              |
|      | Feb 7 (Fri)  | Lecture #2: Faculty Sharing (Prof Andrew HORNER, Prof Desmond TSOI, Prof Kenneth LEUNG)                                  | Experience sharing from educators.                                                                                                                                 |
| 2    | Feb 12 (Wed) | Lecture #3: Guest Speakers Sharing                                                                                       | Sharing from UTOP 2910 alumni who are currently teaching.                                                                                                          |
|      | Feb 14 (Fri) | Lecture #4: "Teach Me One Thing"                                                                                         | Teach Me One Thing" is a chance for students to experience teaching, sharing their passion and knowledge with the class, and preparing them to form teaching team. |

| Week | Date         | Topic/Activity                                                                                                            | Brief Outline                                                                                                                                                               |
|------|--------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Feb 19 (Wed) | Lecture #5: What is Learning?                                                                                             | Explore the concept of learning and how it is often misunderstood, discuss and address the common misconceptions surrounding learning.                                      |
|      | Feb 21 (Fri) | Lecture #6: How Learning Works (Part 1)                                                                                   | Any effective teaching must begin with consideration of how students learn. This lecture intends to introduce the science of learning and research-based learning theories. |
| 4    | Feb 26 (Wed) | Lecture #7: How Learning Works (Part 2)                                                                                   | Any effective teaching must begin with consideration of how students learn. This lecture intends to introduce the science of learning and research-based learning theories. |
|      | Feb 28 (Fri) | Lecture #8: Introduction to Pedagogy                                                                                      | Discussing pedagogical approaches and finalizing teaching topics.                                                                                                           |
| 5    | Mar 5 (Wed)  | Lecture #9: Lesson Plan Design<br><b>Shadowing week (5 -19 March), students can shadow more than one faculty's class.</b> | Importance of effective lesson planning.                                                                                                                                    |
|      | Mar 7 (Fri)  | Lecture #10: Effective Teaching, Questioning and Explanation Skills                                                       | Discussion on instructional strategies.                                                                                                                                     |
| 6    | Mar 12 (Wed) | Lecture #11: Assessment and Feedback                                                                                      | Designing assessments and providing feedback.                                                                                                                               |
|      | Mar 14 (Fri) | Lecture #12: Active Teaching Strategies                                                                                   | Engaging students through active teaching methods.                                                                                                                          |
| 7    | Mar 19 (Wed) | Lecture #13: Innovative Pedagogies                                                                                        | Introducing innovative pedagogies such as Blended Learning and Experiential Learning.                                                                                       |
|      | Mar 21 (Fri) | Preparation of Teaching Materials                                                                                         | Open Consultation session (optional).                                                                                                                                       |
| 8    | Mar 26 (Wed) | Faculty Consultation Week                                                                                                 | Students (as a team) will meet with faculty to discuss the content and topics they intended to teach. The topics must be accurate and appropriate to learners' level.       |
|      | Mar 28 (Fri) | Faculty Consultation Week                                                                                                 |                                                                                                                                                                             |
| 9    | Apr 2 (Wed)  | Mid-term break                                                                                                            |                                                                                                                                                                             |
|      | Apr 4 (Fri)  | Mid-term break                                                                                                            |                                                                                                                                                                             |
| 9    | Apr 9 (Wed)  | Teaching skills consultation                                                                                              | After finalizing the content, students will meet with the course instructor to discuss                                                                                      |

| Week | Date         | Topic/Activity                                         | Brief Outline                                                                                                                                                                     |
|------|--------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Apr 11 (Fri) | Teaching skills consultation                           | (or revise) how they plan to deliver the content to their learners.                                                                                                               |
| 10   | Apr 16 (Wed) | Lecture #14: Rehearsal for Actual Teaching             | Parallel sessions will be arranged so that students will rehearse their FULL lesson to the faculty. Teams that are not rehearsing will be the audience and provide peer feedback. |
|      | Apr 18 (Fri) | <b>Holiday</b>                                         |                                                                                                                                                                                   |
| 11   | Apr 23 (Wed) | Lecture #15: Rehearsal for Actual Teaching             | Parallel sessions will be arranged so that students will rehearse their FULL lesson to the faculty. Teams that are not rehearsing will be the audience and provide peer feedback. |
|      | Apr 25 (Fri) | Preparation for Actual Teaching                        | Open Consultation session (optional).                                                                                                                                             |
|      | Apr 26 (Sat) | Actual Teaching 1                                      | Students will conduct a 1.5-hour real teaching sessions with secondary school students.                                                                                           |
| 12   | Apr 30 (Wed) | Lecture #16: Debrief and Reflection of Actual Teaching | Student will come together as a group to discuss, evaluate and reflect on their actual teaching experience.                                                                       |
|      | May 2 (Fri)  | Preparation for Actual Teaching                        | Open Consultation session (optional).                                                                                                                                             |
|      | May 3 (Sat)  | Actual Teaching 2                                      | Students will conduct a 1.5-hour real teaching sessions on the same topic with a different group of secondary school students.                                                    |
| 13   | May 7 (Wed)  | Lecture #17: Reflection                                | Student will come together as a group and reflect on their overall experience.                                                                                                    |
|      | May 9 (Fri)  | Lecture #18: Teaching Conference                       | Sharing experiences with faculty members.                                                                                                                                         |