### ONCOLOGY 425

**Where:**
ECHA 1-148

**When:**
Winter 2018

**Time:**
Winter 2018: 9:30 am – 10:50 am Tuesday and Thursday commencing January 9, 2018

### Course Description

ONCOL 425 Advanced Topics in Cancer Research *3 (fi 3) (Winter term, 3-0-0)

This course consists of 4 modules, with each module comprised of 6 sessions of 80 minutes each. Each module is taught independently by one or two instructors. Modules will have both lecture and group discussion components. Additional modules may be added based on interest and demand.

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<tr>
<th>Module 1: Stem Cells and Cancer</th>
<th>Module 2: Cell Signaling and Cancer</th>
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<tbody>
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<td>Lecturer: Dr. Lynne Postovit</td>
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<th>Module 3: Mitosis and Aneuploidy in Cancer</th>
<th>Module 4: Deception, Detection and Destruction: How Tumours Interact with the Immune System</th>
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### Pre-requisites:

ONCOL 320, or third year level courses in Cell Biology, Biochemistry and/or Genetics, or consent of the Department.

### Register early to avoid disappointment!

### Contacts:

Ms. Gwen Mendoza:
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# Module Details Winter 2018

## Module 1: Stem Cells and Cancer
- **Week 1** – January 9, 11:  
  *Tumour-initiation mechanisms and cell types involved*
- **Week 2** – January 16, 18:  
  *History of cancer stem cell research*
- **Week 3** – January 23, 25:  
  *Cancer stem cells as therapeutic targets*
  
  **Lecturer:** Dr. Lynne-Marie Postovit

## Module 2: Cell Signaling and Cancer
- **Week 1** – January 30, February 1:  
  *Overview of signaling pathways in cancer*
- **Week 2** – February 6, 8:  
  *Current knowledge of signaling pathways in epithelial-mesenchymal transition (EMT)*
- **Week 3** – February 13, 15:  
  *Notch and TGFbeta pathways in cancer*
  
  **Lecturer:** Dr. YangXin Fu
  
  **Reading Week:** Feb 19-23

## Module 3: Mitosis and Aneuploidy in Cancer
- **Week 1** – February 27, March 1:  
  *Overview of Mitosis*
- **Week 2** – March 6, 8:  
  *Chromosome alignment and mitotic checkpoints*
- **Week 3** – March 13, 15:  
  *Chromosome aneuploidy in cancer*
  
  **Lecturer:** Dr. Gordon Chan

## Module 4: Deception, Detection and Destruction: How Tumours Interact with the Immune System
- **Week 1** – March 20, 22:  
  *Immunoediting and Tumour Immune Evasion*
- **Week 2** – March 27, 29:  
  *Tumour immune detection and cancer cell destruction*
- **Week 3** – April 3, 5:  
  *Anti-Cancer Immunotherapy and Oral Debate*
  
  **Lecturer:** Dr. Kristi Baker
  
  **No final exam**