



UNIVERSITY OF CALGARY  
FACULTY OF SCIENCE  
NANOSCIENCE PROGRAM  
COURSE SYLLABUS  
WINTER 2018

**1. Course:** Nanoscience 511, Integration of Nanotechnology and Biology for Medical Applications

Lecture Sections:

L01: MoWe 6:00PM - 7:15PM, SA 107

Instructor	Office	Tel. No.	e-mail address	Office hours
Dr. Max Anikovskiy	EEEL 237A	(403) 220-3115	<a href="mailto:m.anikovskiy@ucalgary.ca">m.anikovskiy@ucalgary.ca</a>	By appointment

Desire 2 Learn (D2L) Nanoscience 511

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To avoid IT problems, it is recommended that the students use their U of C account for all course correspondence.

**2. Course Description:**

**Lectures:** The applications of nanotechnology in drug delivery and medical imaging will be explored.

**3. Topics Covered and Suggested Readings:**

1. Introduction to nanobiosensors; approaches to target detection.
2. Chemical modification; surface chemistry.
3. Protein labelling chemistry.
4. DNA labelling chemistry.
5. Linkers for bioconjugation.
6. Fluorescence based nanosensors.
7. Microfluidics.

Program Director's Approval:

Approved by Program Director

Date: January 4<sup>th</sup>, 2018