

MSCBMP 2860 Multiparametric Microscopic Imaging

Summer 2022

Tuesdays and Thursdays 10-11:30 May 12-July 28, 2022 (Take home final due at 5 PM)

Cell Biology Conference Room, BST South 373. 3

Grades based on take home exams and attendance.

May 12 Thursday: **Simon Watkins:** Optics for Transmitted light and contrast, Principles of Fluorescence and detection systems

May 17 Tuesday: **Claudette St. Croix:** Fluorescent Probes

May 19 Thursday: **Donna Stolz:** Cell/Tissue Labeling I

May 24 Tuesday: **Donna Stolz:** Cell/Tissue Labeling II

May 26 Thursday: **Donna Stolz:** Image presentation, Photoshop, Ethics

May 31 Tuesday: **Claudette St Croix:** Confocal

June 2 Thursday: **Claudette St Croix:** Advanced Confocal Techniques

EXAM 1 Distributed June 2nd, Due June 9th @ 5 PM

June 7 Tuesday: **Claudette St. Croix:** Live Cell Imaging

June 9 Thursday: **Michael Tsang:** Live animal Imaging: Zebrafish Model

June 14 Tuesday: OFF

June 16 Thursday: OFF

June 21 Tuesday: **Off**

June 23 Thursday: **Ben Van Houten:** Atomic Force Microscopy

June 28 Tuesday: **Alan Watson:** Tissue Clearing and whole tissue reconstruction.

EXAM 2 Distributed June 28th, Due July 5th at 5 PM

June 30 Thursday: **Donna Stolz:** EM I

July 5 Tuesday: **Donna Stolz:** EM II

July 7 Thursday: **Donna Stolz** EMIII

July 12 Tuesday **James Conway:** Cryo-Electron Microscopy

July 14 Thursday: **Simon Watkins**: TIRF

July 19 Tuesday: **Simon Watkins**: Super Resolution

July 21 Thursday: **Geoffrey Camirand**: Multi-Photon Imaging

July 26 Tuesday: **Simon Watkins**: Light Sheet

EXAM 3(FINAL) Distributed July 21st, Due July 28 @ 5 PM

Expectations: Attendance is mandatory and counts for 25% of the grade. Remaining 75% will be based on the 3 exams (25% each).

Faculty:

Course Directors/lecturers:

Donna Stolz, Ph.D. dstolz@pitt.edu

Claudette St. Croix, Ph.D. cls13@pitt.edu

Lecturers:

Simon Watkins, Ph.D., swatkins@pitt.edu

Alan Watson, Ph.D., alan.watson@pitt.edu

Geoffrey Camirand, Ph.D., geoffrey.camirand@pitt.edu

Bennett Van Houten, Ph.D. vanhoutenb@upmc.edu

James Conway, Ph.D., James.Conway@pitt.edu

Michael Tsang, Ph.D., tsang@pitt.edu