

# DEVELOPMENTAL AND STEM CELL BIOLOGY (DEV STMCEL)

## DEV STMCEL 215 Laboratory Rotation (3-8 Units) Fall, Winter, Spring, Summer

*Instructor(s):* Staff  
*Prerequisite(s):* None.

*Restrictions:* For graduate students enrolled in the DSCB Program.

*Activities:* Project, Lab science

Research experience in the laboratory of DSCB faculty members. Rotations will be six weeks each (two in one term and one in another). Students can select the laboratory of any faculty member within the DSCB Graduate Program.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** Yes

**Does enrollment in this course require instructor approval?** Yes

**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

**Repeat course for credit?** Yes

## DEV STMCEL 216 Journal Club (1 Units) Fall, Winter, Spring

*Instructor(s):* Dan Wagner, Todd Nystul  
*Prerequisite(s):* None.

*Restrictions:* None.

*Activities:* Seminar

Participation in the Developmental Biology Journal Club and Stem Cell Biology Journal Club, which cover current research publications in developmental and stem cell biology. Each student must contribute regularly and present a research paper on at least one occasion per quarter. Presentations will be evaluated by fellow students, postdocs, and faculty. Course culminates with an annual student-run Symposium.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** No

**Does enrollment in this course require instructor approval?** No

**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

**Repeat course for credit?** Yes

## DEV STMCEL 217 Seminar Series (1 Units) Fall, Winter, Spring

*Instructor(s):* Brian Black  
*Prerequisite(s):* None.

*Restrictions:* None.

*Activities:* Seminar

Seminar series covering research in developmental and stem cell biology. Each student must participate regularly and presentations will be critically reviewed by students in group discussions under supervision by faculty or guest lecturers.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** No

**Does enrollment in this course require instructor approval?** No

**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

**Repeat course for credit?** Yes

## DEV STMCEL 225 Programming and Statistics (2 Units) Winter

*Instructor(s):* Todd Nystul, Dan Wagner  
*Prerequisite(s):* none

*Restrictions:* Students who are not in a UCSF graduate program must get permission from the instructor to take the course.

*Activities:* Lecture

An integrated overview, divided into three modules, of the essential biostatistical ideas and tools needed to work as a biomedical researcher. The first two modules include an overview of statistics theory, instruction in data organization best practices, quantitative image analysis, and data presentation. The third module will introduce Python programming and provide an introduction into analysis of large genomic datasets, including bulk RNAseq data and single cell RNAseq data.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** No

**Does enrollment in this course require instructor approval?** Yes

**Course Grading Convention:** Letter Grade, P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course?** Yes

**Repeat course for credit?** No

## **DEV STMCEL 250 Research (1-8 Units) Fall, Winter, Spring, Summer**

*Instructor(s):* Staff

*Prerequisite(s):* Students must have completed prior laboratory rotations.

*Restrictions:* None.

*Activities:* Lab science

Dissertation research in a Developmental & Stem Cell Biology (DSCB) laboratory.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** Yes

**Does enrollment in this course require instructor approval?** Yes

**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD)**

**enroll in this course?** Yes

**Repeat course for credit?** No

## **DEV STMCEL 257 Developmental and Stem Cell Biology (4 Units) Fall**

*Instructor(s):* Seyedeh Faranak Fattahi

*Prerequisite(s):* Previous or concurrent enrollment in graduate level cell biology.

*Restrictions:* None.

*Activities:* Lecture, Seminar, Project

A course emphasizing the fundamental concepts of stem cell biology and development. The interrelated themes of pluripotency, differentiation, organogenesis, regeneration, patterning and morphogenesis will be approached through the lens of the organism, with emphasis on what different model systems teach us about the evolution of development. It will comprise case studies organized in coordinated mini-units, through which concepts, cellular behaviors and molecular mechanisms will be explored.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** No

**Does enrollment in this course require instructor approval?** Yes

**Course Grading Convention:** Letter Grade

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD)**

**enroll in this course?** Yes

**Repeat course for credit?** No

## **DEV STMCEL 270 Special Topics in Developmental & Stem Cell Biology (3 Units) Spring**

*Instructor(s):* Staff

*Prerequisite(s):* None. Completion of first-year curriculum in Developmental & Stem Cell Biology or other experimental biology graduate programs is helpful but not essential.

*Restrictions:* Biomedical Sciences graduate students and other graduate and professional students with interests in DSCB. Permission from instructor required.

*Activities:* Lecture, Independent Study

Course offerings will focus on literature of a current important area of Development & Stem Cell biology research. Students will be expected to read assigned papers critically before class and to present and discuss papers in class. Students will also be expected to write and/or present a brief research proposal based upon their reading.

**School:** Graduate Division

**Department:** Developmental And Stem Cell Biology Program

**May the student choose the instructor for this course?** Yes

**Does enrollment in this course require instructor approval?** Yes

**Course Grading Convention:** P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)

**Graduate Division course:** Yes

**Is this a web-based online course?** No

**Is this an Interprofessional Education (IPE) course?** No

**May students in the Graduate Division (i.e. pursuing Master or PhD)**

**enroll in this course?** No

**Repeat course for credit?** Yes