



Detta dokument är ett underlag som förtecknar den information som måste anges i en kursplan för kurs på forskarnivå vid Vetenskapsområdet för medicin och farmaci. Ingen rubrik får tas bort och samtliga måste fyllas i. Kursplanen fastställs sedan formellt av KUF och utgör därefter underlag för information i kursdatabasen samt till rapportering i LADOK.

Den kursplan som formellt fastställs författas på svenska, men den skall också efter fastställande översättas till engelska för ökad tillgänglighet.

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| <b>Kurskod:</b>                     | FMF0068  |
| <b>Kurstitel:</b>                   | <i>ADVANCED CANCER BIOLOGY</i>                         |
| <b>Kurspoäng:</b>                   | <b>3</b>   |
| <b>Nivå:</b>                        | Kurs på forskarutbildningsnivå (third-cycle education) |
| <b>Kursansvarig:</b>                | <b>Laia Caja Puigsubirà</b>                            |
| <b>Ansvarig institution:</b>        | Department of Medical Biochemistry and Microbiology    |
| <b>Undervisningsspråk:</b>          | <i>Engelska</i>  |
| <b>Forskningsspår:</b>              | <i>Cancer</i>  |
| <b>Beskrivning av kursinnehåll:</b> |  |

The course in advanced cancer biology aims to give a concise overview of important topics in the field of tumor biology. The 5-day course will include both theoretical lectures on different aspects of tumor biology, including: the molecular basis of tumor biology, the tumor microenvironment, clinical oncology and advanced tumor research models. Students will develop skills in critical reading and presentation of relevant literature by attending journal clubs and case discussions. Special attention will be given to advanced models to study tumor cell behavior and to identify therapeutic targets, including 3D in vitro models, bio-printing and mathematical modelling. These topics will be covered via lectures and practical demonstrations in small groups. The course is aimed primarily at PhD students and fits with the research tracks “cancer” and “inflammation”. The course is also open to postdocs and researchers.

#### **Undervisningsformer:**

Each topic consists out of a +/- 1,5 hour lecture and a group discussion (journal club, seminar or demonstration) for which the students will be divided in smaller groups (max 5 students) depending on their research interest. During the PhD research seminar, the students present their own research (30 minutes per presentation).

#### **Lärandemål:**

After the course, the students are expected to:

- Describe the molecular basis of cancer.
- Indicate the role of the tumor micro-environment in tumor progression.
- Outline basic clinical aspects of cancer.



- Use advanced tumor-biology techniques (such as bio-printing and 3D in vitro models) via on-hands demonstrations.
- Summarize and discuss scientific literature in the field of tumor biology, specifically focusing on the above-mentioned topics
- Criticize and defend research findings in the field of tumor biology.

**Examinator:** *[fastställs av KUF i samband med kursplanen, observera att examinator skall inneha läraranställning vid UU]*

**Obligatoriska moment:** All

**Examinationsform:**

*Attendance at lectures, oral presentation at the seminars, and active participation during journal clubs and seminars are required.*

**Kurslitteratur:** Aktuella vetenskapliga artiklar enligt särskild anvisning

**Förkunskapskrav:** Antagen till forskarutbildning vid vetenskapsområdet för medicin och farmaci.

**Maximalt antal deltagare:** 20

**Urval:**

The course requires active discussions in small groups during Journal Clubs and seminars, as well as presentations (30 minutes) by each student. If more students would be allowed, it would either mean larger discussion groups (which would decrease the quality of the education) or require more teachers. At the moment we run the course in two to three parallel groups for the small group discussions.

**Övrig information:**

**Kontakt:** *Laia Caja Puigsubirà [[laia.caja@imbim.uu.se](mailto:laia.caja@imbim.uu.se)]*

**Fastställd, datum och nr:** *[här anges av KUF datumet som kursplanen fastställts, samt d-nr]*