

### Program Entrance Requirements

- Open to Emory undergraduate junior students with a strong background in science
- 1 yr Foundations of Modern Biology I/II (Bio 141/142) with labs
- 1 upper level biology course (Cell & Molecular area: Biol 223 Dev. Bio, Biol 250 Cell Bio, Biol 264 Genetics, or Biol 415 Cancer Bio)
- 1 semester of Organic Chemistry (Chem 221) with lab.
- 1 semester each of Math, Physics and Statistics
- 1 semester of Biochemistry (Biol/Chem 301)
- Can be completed during the senior year
- Prior research experience is an advantage

### What does the program cost?

The tuition for students entering the CBTO 4+1 program in Fall 2016 is \$39,800 + fees, for a total of 38 credits.

### Degree Requirements

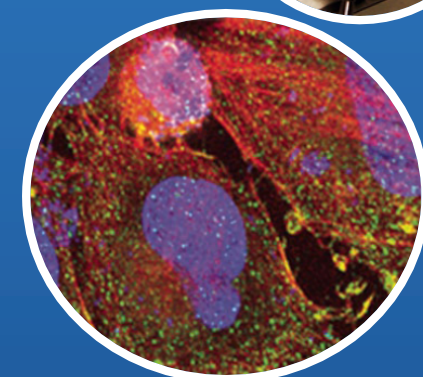
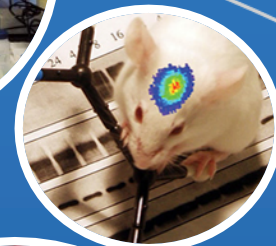
- 20 credit hours of required courses
- 18 credit hours of lab research
- Master's Thesis and Oral Defense



### Course Organization & Lab Research

In the first year of the program (senior year), students will take the core Cancer Biology I and II courses (IBS 523/524), the Advanced Graduate Seminar Course in Cancer Biology (CB 790R) and will start their research in a cancer laboratory (Biol 499R or Biol 495A/B courses).

The MS thesis research project will continue during the summer, fall and spring semesters (IBS 599R. Advanced Research) of the second year. During the 2<sup>nd</sup> year, students will also acquire the skills to critically read the scientific literature.



## 4+1 Master of Science in Cancer Biology & Translational Oncology



For more information, contact:

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cbto@emory.edu

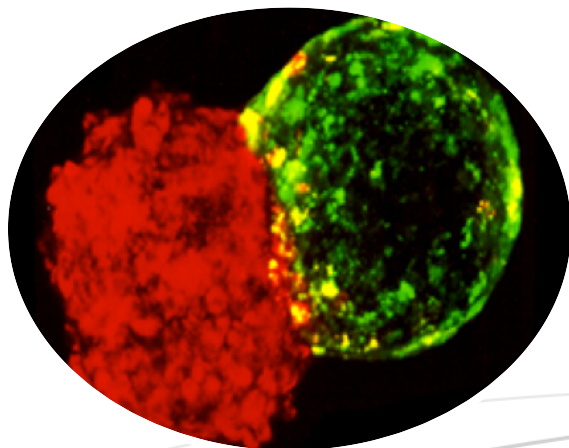
Apply here by January 30, 2017:

[http://biomed.emory.edu/PROGRAM\\_SITES/CB/4+1CBTO/apply/](http://biomed.emory.edu/PROGRAM_SITES/CB/4+1CBTO/apply/)



EMORY

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# Cancer Biology Graduate Program

The Graduate Program in Cancer Biology (CB) provides outstanding training opportunities at the PhD and MS levels in every aspect of cancer research, from basic to translational research. This includes molecular and cellular biology, genetics and epigenetics, signal transduction, genetic engineering, nanotechnologies, and many other disciplines used to understand the development and progression of cancer. Many different approaches are applied to a range of model systems to address how a normal cell becomes a cancer cell, how cancer progresses to a metastatic state at the molecular level and how our understanding of these mechanisms can be exploited for the design of new cancer therapies or novel ways to apply existing anti-cancer agents in the clinic.

## *Program Goals*

The major goal of the 4+1 BS-MS dual degree program is to provide outstanding graduate level training for future leaders in the different aspects of cancer research in preparation for a diversity of career paths in research, teaching, and medicine from academia to industry.

Learning objectives:

At the completion of their training, students will:

- demonstrate broad knowledge of cancer biology. Students will develop a mastery of the literature and a deep understanding of major questions in their chosen area of cancer research.
- design and conduct hypothesis-driven research using state-of-the-art techniques that results in significant scholarly advances.

- be able to critically interpret the scientific literature and use effective written and oral communication to present their scientific discoveries.

## *Who is this for?*

This program aims to train and help launch the career of the next generation of cancer scientists and oncologists.

## *Faculty*

The CB program has a diverse membership drawn from over 10 different basic science and clinical departments on the Emory campus. The faculty are members of the Winship Cancer Institute, an NCI-designated Cancer Center, and have a common research interest in cancer, but apply a variety of disciplines, including virology, molecular biology, biochemistry, genetics, immunology, and cell biology, to understand the mechanisms of cancer formation and malignant progression, from basic principles to the development of novel experimental therapeutics.

[http://biomed.emory.edu/PROGRAM\\_SITES/CB/4+1CBTO/research/research\\_faculty.html](http://biomed.emory.edu/PROGRAM_SITES/CB/4+1CBTO/research/research_faculty.html)

## *What can you do in the future?*

The training provided in our 4+1 program prepares students for a variety of careers where the analytical and discovery thinking skills and laboratory experience will be valuable assets. When they leave the program, our trainees will have the skills and knowledge necessary to participate in advanced analysis and problem solving for cancer-related careers in work settings including medical and research academia, translational and physician-scientists, clinical oncology, teaching, government health agencies, non-profits, patent law, science journalism, and private industry.



\*The Winship Cancer Institute of Emory University (Winship) serves as a hub for many of the research activities within the Cancer Biology Graduate program.