

## **Emphasis in Epithelial Biology and Carcinogenesis**

PhD students who wish to focus their research and scholarship on the pathobiology of the mucosal epithelium will be well prepared if guided by this recommended program. Students should choose one of the recommended academic minors and follow the suggested calendar. Each calendar paces the student through the program and targets completion of the PhD program in 48 months.

### **RECOMMENDED COURSES**

*minor in Microbiology, Immunology & Cancer Biology (MICaB):*

|            |                                                    |           |
|------------|----------------------------------------------------|-----------|
| GCD 5036   | Molecular Cell Biology                             | 3 credits |
| MICA 8004  | Cellular and Cancer Biology                        | 4 credits |
| MICA 8010  | Microbial Pathogenesis                             | 3 credits |
| MICA 8910  | Seminar: Faculty Research Topics                   | 0 credits |
| OBIO 8028* | Molecular Basis of Cellular and Microbial Adhesion | 2 credits |

*minor in Molecular, Cellular, Developmental Biology & Genetics (MCDB&G):*

|           |                                                          |           |
|-----------|----------------------------------------------------------|-----------|
| BIOC 8002 | Molecular Biology and Regulation of Biological Processes | 3 credits |
| GDC 8131  | Advanced Genetics                                        | 3 credits |
| GCD 8151  | Cell Structure and Function                              | 3 credits |
| OR        | GCD 5036 Molecular Cell Biology                          | 3 credits |
| GCD 8161  | Advanced Developmental Biology                           | 3 credits |

\*All PhD students in the Oral Biology graduate program, regardless of emphasis, must satisfactorily complete 8 credits of oral biology topics courses (OBIO 8012, 8018, 8021-8028, 8371), and register and participate in the oral biology student seminar series (OBIO 8030) each semester.

### **CONTACTS**

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### **REPRESENTATIVE FACULTY**

[Alvin J. Beitz, PhD](#)  
[Massimo Costalonga, DMD, PhD](#)  
[Gary M. Dunny, PhD](#)  
[Sven-Ulrik Gorr, PhD](#)

[Mark C. Herzberg, DDS, PhD](#)  
[Karen Ross, PhD](#)  
[Joel Rudney, PhD](#)  
[Larry F. Wolff, DDS, PhD](#)

Information in this document is subject to change. Students are responsible for verifying information with their advisors and all relevant departments.

## CALENDARS

Option 1: minor in MICAB

### Year 1

| <b>Fall</b>           | <i>Months 1-4</i> | <b>Spring</b>         | <i>Months 5-9</i> | <b>Summer</b>                  | <i>Months 10-12</i> |
|-----------------------|-------------------|-----------------------|-------------------|--------------------------------|---------------------|
| GCD 5036              | 3 cr              | MICA 8004             | 4 cr              | Summer enrollment is optional. |                     |
| MICA 8002             | 4 cr              | MICA 8910             | 0 cr              |                                |                     |
| OBIO 802x             | 2 cr              | OBIO 8028             | 2 cr              | OBIO 8666                      | 6 cr                |
| OBIO 8030             | 1 cr              | OBIO 8030             | 1 cr              |                                |                     |
| <i>Total credits:</i> | <i>10</i>         | <i>Total credits:</i> | <i>7</i>          | <i>Total credits:</i>          | <i>6</i>            |

### Year 2

| <b>Fall</b>           | <i>Months 13-16</i> | <b>Spring</b>                   | <i>Months 17-21</i> | <b>Summer</b>                  | <i>Months 22-24</i> |
|-----------------------|---------------------|---------------------------------|---------------------|--------------------------------|---------------------|
| MICA 8010             | 3 cr                | MICA 8009                       | 2 cr                | Summer enrollment is optional. |                     |
| MICA 8910             | 0 cr                | MICA 8910                       | 1 cr                |                                |                     |
| OBIO 802X             | 2 cr                | OBIO 802X                       | 2 cr                | If prelims completed:          |                     |
| OBIO 8030             | 1 cr                | OBIO 8030                       | 1 cr                | OBIO 8888                      | 6 cr.               |
| STAT 5021             | 4 cr                | Oral prelim. exam (by month 18) |                     | If prelims not completed:      |                     |
| Written prelim. exam  |                     |                                 |                     | OBIO 8666                      | 6 cr.               |
| <i>Total credits:</i> | <i>10</i>           | <i>Total credits:</i>           | <i>6</i>            | <i>Total credits:</i>          | <i>6</i>            |

### Year 3

| <b>Fall</b>           | <i>Months 25-28</i> | <b>Spring</b>         | <i>Months 29-33</i> | <b>Summer</b>                  | <i>Months 34-36</i>                           |
|-----------------------|---------------------|-----------------------|---------------------|--------------------------------|-----------------------------------------------|
| OBIO 8030             | 1 cr                | OBIO 8030             | 1 cr                | Summer enrollment is optional. |                                               |
| OBIO 8888             | 8 cr                | OBIO 8888             | 8 cr                |                                |                                               |
| <i>Total credits:</i> | <i>10</i>           | <i>Total credits:</i> | <i>9</i>            | OBIO 8888                      | 2 or 8 cr<br>(depends on # taken in Summer 2) |

### Year 4

| <b>Fall</b>           | <i>Months 37-40</i> | <b>Spring</b>                        | <i>Months 41-45</i> | <b>Summer</b>          | <i>Months 46-48</i> |
|-----------------------|---------------------|--------------------------------------|---------------------|------------------------|---------------------|
| OBIO 8030             | 1 cr                | OBIO 8030                            | 1 cr                | Dissertation writing   |                     |
| Research              |                     | Month 43: 6 month seminar            |                     | Final oral examination |                     |
|                       |                     | Month 45: Begin writing dissertation |                     |                        |                     |
| <i>Total credits:</i> | <i>1</i>            | <i>Total credits:</i>                | <i>1</i>            |                        |                     |

All students, regardless of emphasis, must satisfy the following course requirements:

- Complete a major core curriculum of at least 24 credits.
- Complete 8 credits of oral biology topics courses (OBIO 8012, 8018, 8021-8028, 8371).
- Complete one statistics course (STAT 5021, PUBH 6450, PUBH 7445, or equivalent).
- Register and participate in the oral biology student seminar series (OBIO 8030) each semester for 10 semesters or until graduation, whichever comes first.
- Complete a designated minor (minimum 12 credits) in a nonclinical discipline.
- Register for 24 thesis credits (OBIO 8888) after passing the preliminary written and oral exams.

## Option 2: minor in MCDB&amp;G

**Year 1**

| <b>Fall</b>           | <i>Months 1-4</i> | <b>Spring</b>         | <i>Months 5-9</i> | <b>Summer</b>                  | <i>Months 10-12</i> |
|-----------------------|-------------------|-----------------------|-------------------|--------------------------------|---------------------|
| BIOC 8002             | 4 cr              | GCD 8161              | 3 cr              | Summer enrollment is optional. |                     |
| GCD 5036              | 3 cr              | OBIO 8012             | 2 cr              |                                |                     |
| OBIO 802x             | 2 cr              | OBIO 8030             | 1 cr              | OBIO 8666                      | 6 cr                |
| OBIO 8030             | 1 cr              | STAT 5021             | 4 cr              |                                |                     |
| <i>Total credits:</i> | <i>10</i>         | <i>Total credits:</i> | <i>10</i>         | <i>Total credits:</i>          | <i>6</i>            |

**Year 2**

| <b>Fall</b>           | <i>Months 13-16</i> | <b>Spring</b>                   | <i>Months 17-21</i> | <b>Summer</b>                  | <i>Months 22-24</i> |
|-----------------------|---------------------|---------------------------------|---------------------|--------------------------------|---------------------|
| GCD 8073              | 3 cr                | MICA 8007                       | 3 cr                | Summer enrollment is optional. |                     |
| OBIO 8371             | 3 cr                | OBIO 802X                       | 2 cr                |                                |                     |
| OBIO 8030             | 1 cr                | OBIO 8030                       | 1 cr                | If prelims completed:          |                     |
| Written prelim. exam  |                     | Oral prelim. exam (by month 18) |                     | OBIO 8888                      | 6 cr.               |
|                       |                     |                                 |                     | If prelims not completed:      |                     |
|                       |                     |                                 |                     | OBIO 8666                      | 6 cr.               |
| <i>Total credits:</i> | <i>7</i>            | <i>Total credits:</i>           | <i>6</i>            | <i>Total credits:</i>          | <i>6</i>            |

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| <b>Fall</b>           | <i>Months 25-28</i> | <b>Spring</b>         | <i>Months 29-33</i> | <b>Summer</b>                  | <i>Months 34-36</i>                           |
|-----------------------|---------------------|-----------------------|---------------------|--------------------------------|-----------------------------------------------|
| OBIO 8030             | 1 cr                | OBIO 8030             | 1 cr                | Summer enrollment is optional. |                                               |
| OBIO 8888             | 8 cr                | OBIO 8888             | 8 cr                |                                |                                               |
| <i>Total credits:</i> | <i>9</i>            | <i>Total credits:</i> | <i>9</i>            | OBIO 8888                      | 2 or 8 cr<br>(depends on # taken in Summer 2) |

**Year 4**

| <b>Fall</b>           | <i>Months 37-40</i> | <b>Spring</b>                        | <i>Months 41-45</i> | <b>Summer</b>          | <i>Months 46-48</i> |
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|                       |                     | Month 45: Begin writing dissertation |                     |                        |                     |
| <i>Total credits:</i> | <i>1</i>            | <i>Total credits:</i>                | <i>1</i>            |                        |                     |

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