**Existing:**

[**Biological Sciences**](http://www.bio.udel.edu/prospective-graduate-students)PhD, MS, PhD/MBA

The Department of Biological Sciences offers Master of Science and Doctor of Philosophy degrees in the fields of physiology; cancer biology, cardiovascular biology; cell and extracellular matrix biology; developmental biology; microbiology and virology; and molecular biology and genetics. Formalized concentrations have been established to provide students with customized research and career mentorship. Since many students pursuing the PhD in Biological Sciences are interested in pursuing careers in industrial science, the Department of Biological Sciences and The Alfred Lerner College of Business and Economics has developed a jointly administered PhD in Biological Sciences/ MBA degree.

A dual degree in the MBA & PhD in Biological Sciences programs is available to graduate students.

### <http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751&returnto=479>

### PH.D. in Biological Sciences and Master in Business Administration (PHD/MBA)

#### Program History

The [Department of Biological Sciences](http://www.bio.udel.edu/) has offered the Ph.D. in Biological Sciences since 1953 with the goal of training scientists to independently seek new knowledge relevant to the life sciences. The [Alfred Lerner College of Business and Economics](http://lerner.udel.edu/) has offered the Master in Business Administration (MBA) degree since 1954 to prepare students for the business world. Since many students pursuing the Ph.D. in Biological Sciences are interested in pursuing careers in industrial science, the Department of Biological Sciences and The Alfred Lerner College of Business and Economics has developed a joint Ph.D. in Biological Sciences/ MBA degree. The Department of Biological Sciences and the Alfred Lerner College of Business and Economics jointly administer this program.

#### Admission

Students desiring to pursue the joint Ph.D. in Biological Sciences/MBA initially apply directly to the Ph.D. program of the Department of Biological Sciences and must meet the [admissions requirements of the Ph.D. program](http://www.bio.udel.edu/dual-degree-phd-biological-sciences-and-master-business-administration-mba#admission). The student matriculates into the Ph.D. program, must successfully complete all first year course work, choose a dissertation advisor, pass the preliminary examination, and form their dissertation advisory committee as required for the Ph.D. program. During the summer between the first and second year in the Ph.D. program, the student must convene their advisory committee and petition them for permission to take six credits of tier one MBA coursework in addition to their Ph.D. coursework requirements during the second year. Since Ph.D. students are supported on assistantships based in the Department of Biological Sciences and receive tuition scholarships for these assistantships, continued enrollment in any MBA classes is dependent on maintained satisfactory progress towards the Ph.D.

Once the student has successfully completed all required course work for the Ph.D. degree and has completed six credits of MBA coursework, students interested in the joint Ph.D./MBA program must convene their Ph.D. advisory committee and petition for permission to apply to the joint Ph.D./MBA program. If this petition is granted, the student’s progress towards the Ph.D. is reviewed by the Graduate Affairs Committee (GAC) of the Department of Biological Sciences. If GAC finds that the student is in good standing in the Department, the student then applies to the MBA program for admission into the joint Ph.D./MBA program. The prospective student is encouraged to see the admissions policies for both programs in the graduate catalog.

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| Current:Required CoursesPh.D. Core & Required Courses* [BISC 827 - Graduate Research Seminar (0 to 1cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)(1 credit/semester minimum of 4 semesters required)
* First semester concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3-4 Credits
* Second semester concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3-4 Credits
* [BISC 864 - Research Tutorial (1 to 8cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)(3, 2 credit tutorials required)
* Second year concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3 Credits
* Second year concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3 Credits
* [BISC 969 - Doctoral Dissertation (1 to 12cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)(nine credits)

MBA Core & Required Courses* [ECON 503 - Economic Analysis for Business Policy (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier I
* [ACCT 800 - Financial Reporting and Analysis (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier I
* [BUAD 820 - Fundamentals of Analytics (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier I
* [BUAD 870 - Managing People, Teams, and Organizations (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier I
* [FINC 850 - Financial Management (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier II
* [BUAD 880 - Marketing Management (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier II
* [BUAD 831 - Operations Management and Management Science (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier II
* [BUAD 840 - Ethical Issues in Domestic and Global Business Environments (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier III
* [ACCT 801 - Management Accounting and Control (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier III
* [BUAD 890 - Corporate Strategy (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)Tier III
* International business elective 3 Credits

Total Required Credits: 64\* MBA Tiers indicate approximate sequence that courses should be taken.Transfers of coursework earned elsewhere, and waivers of courses are allowable under the same provisions as the Ph.D. and MBA programs separately. Dual degree students must complete a minimum of 64 credits of coursework at the graduate level. Since financial aid for students in the joint Ph.D./MBA program is provided from the same sources as students in the Ph.D. program in Biological Sciences (see below), continued enrollment in MBA courses is dependent on the student making satisfactory progress towards the Ph.D. This is certified by the student’s Ph.D. advisory committee at the student’s regular committee meeting that is held at 6-month intervals. Students in this program are under the same expectations of research excellence as those in the traditional Ph.D. program in Biological Sciences. The MBA committee of the Lerner College of Business is responsible for monitoring progress in the business curriculum.Students must maintain continuous enrollment in every regular semester (fall and spring) throughout their program unless by approved leave of absence. This can be accomplished by registering for research or dissertation credit during the time the dissertation project is underway, or by registering for sustaining status. See the catalog for the university policy on [sustaining status](http://grad.udel.edu/policies/#registration), and regarding [leave of absence](http://catalog.udel.edu/content.php?catoid=12&navoid=457#leave-of-absence-and-parental-accommodation). |

**Proposed:**

[**Biological Sciences**](http://www.bio.udel.edu/prospective-graduate-students)PhD, MS, PhD/MBA

The Department of Biological Sciences offers Master of Science and Doctor of Philosophy degrees in the fields of physiology; cancer biology, cardiovascular biology; cell and extracellular matrix biology; developmental biology; microbiology and virology; and molecular biology and genetics. Formalized concentrations have been established to provide students with customized research and career mentorship. Since many students pursuing the PhD in Biological Sciences are interested in pursuing careers in industrial science, the Department of Biological Sciences and The Alfred Lerner College of Business and Economics has developed a jointly administered PhD in Biological Sciences/ MBA degree.

A dual degree in the MBA & PhD in Biological Sciences programs is available to graduate students.

### PH.D. in Biological Sciences and Master in Business Administration (PHD/MBA)

#### Program History

The [Department of Biological Sciences](http://www.bio.udel.edu/) has offered the Ph.D. in Biological Sciences since 1953 with the goal of training scientists to independently seek new knowledge relevant to the life sciences. The [Alfred Lerner College of Business and Economics](http://lerner.udel.edu/) has offered the Master in Business Administration (MBA) degree since 1954 to prepare students for the business world. Since many students pursuing the Ph.D. in Biological Sciences are interested in pursuing careers in industrial science, the Department of Biological Sciences and The Alfred Lerner College of Business and Economics has developed a joint Ph.D. in Biological Sciences/ MBA degree. The Department of Biological Sciences and the Alfred Lerner College of Business and Economics jointly administer this program.

#### Admission

Students desiring to pursue the joint Ph.D. in Biological Sciences/MBA initially apply directly to the Ph.D. program of the Department of Biological Sciences and must meet the [admissions requirements of the Ph.D. program](http://www.bio.udel.edu/dual-degree-phd-biological-sciences-and-master-business-administration-mba#admission). The student matriculates into the Ph.D. program, must successfully complete all first year course work, choose a dissertation advisor, pass the preliminary examination, and form their dissertation advisory committee as required for the Ph.D. program. During the summer between the first and second year in the Ph.D. program, the student must convene their advisory committee and petition them for permission to take six credits of MBA coursework in addition to their Ph.D. coursework requirements during the second year. Since Ph.D. students are supported on assistantships based in the Department of Biological Sciences and receive tuition scholarships for these assistantships, continued enrollment in any MBA classes is dependent on maintained satisfactory progress towards the Ph.D.

Once the student has successfully completed all required course work for the Ph.D. degree and has completed six credits of MBA coursework, students interested in the joint Ph.D./MBA program must convene their Ph.D. advisory committee and petition for permission to apply to the joint Ph.D./MBA program. If this petition is granted, the student’s progress towards the Ph.D. is reviewed by the Graduate Affairs Committee (GAC) of the Department of Biological Sciences. If GAC finds that the student is in good standing in the Department, the student then applies to the MBA program for admission into the joint Ph.D./MBA program. The prospective student is encouraged to see the admissions policies for both programs in the graduate catalog.

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| Required CoursesPh.D. Core & Required Courses* [BISC 827 - Graduate Research Seminar (0 to 1cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)(1 credit/semester minimum of 4 semesters required)
* First semester concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3-4 Credits
* Second semester concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3-4 Credits
* [BISC 864 - Research Tutorial (1 to 8cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)(3, 2 credit tutorials required)
* Second year concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3 Credits
* Second year concentration requirement (see [concentration policy](http://catalog.udel.edu/preview_entity.php?catoid=12&ent_oid=751)) 3 Credits
* [BISC 969 - Doctoral Dissertation (1 to 12cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)(nine credits)

MBA Required Courses* [ECON 503 - Economic Analysis for Business Policy (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [ACCT 800 - Financial Reporting and Analysis (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [BUAD 820 - Fundamentals of Analytics (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [BUAD 870 - Managing People, Teams, and Organizations (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [FINC 850 - Financial Management (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [BUAD 880 - Marketing Management (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [BUAD 831 - Operations Management and Management Science (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* [BUAD 840 - Ethical Issues in Domestic and Global Business Environments (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* ~~[ACCT 801 - Management Accounting and Control (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)~~
* [BUAD 890 - Corporate Strategy (3cr.)](http://catalog.udel.edu/preview_program.php?catoid=12&poid=5825)
* BUEC601 Emotional Intelligence and Critical Thinking (1 credit)
* BUEC603 Communications, Personal Branding and Career Networks (1 credit)
* International business elective 3 Credits

Total Required Credits: 63Transfers of coursework earned elsewhere, and waivers of courses are allowable under the same provisions as the Ph.D. and MBA programs separately. Dual degree students must complete a minimum of 63 credits of coursework at the graduate level. Since financial aid for students in the joint Ph.D./MBA program is provided from the same sources as students in the Ph.D. program in Biological Sciences (see below), continued enrollment in MBA courses is dependent on the student making satisfactory progress towards the Ph.D. This is certified by the student’s Ph.D. advisory committee at the student’s regular committee meeting that is held at 6-month intervals. Students in this program are under the same expectations of research excellence as those in the traditional Ph.D. program in Biological Sciences. The MBA committee of the Lerner College of Business is responsible for monitoring progress in the business curriculum.Students must maintain continuous enrollment in every regular semester (fall and spring) throughout their program unless by approved leave of absence. This can be accomplished by registering for research or dissertation credit during the time the dissertation project is underway, or by registering for sustaining status. See the catalog for the university policy on [sustaining status](http://grad.udel.edu/policies/#registration), and regarding [leave of absence](http://catalog.udel.edu/content.php?catoid=12&navoid=457#leave-of-absence-and-parental-accommodation). |