

**MOLECULAR BIOLOGY & INTERDISCIPLINARY LIFE SCIENCES**  
**GRADUATE PROGRAM (MOLB-ILS)**  
**GRADUATE MINOR REQUIREMENTS**

**To: Student's Dean**

Date: \_\_\_\_\_

**Student Name:**\_\_\_\_\_ **Banner ID:** \_\_\_\_\_

**Email:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Advisor Name & Dept.:** \_\_\_\_\_

I have completed the following courses, which satisfy the requirements for a GRADUATE minor in MOLB-ILS.

It is mandatory you provide a copy of this form, with applicable signatures, to the MOLB-ILS office (361 Chemistry Bldg.).

Successful completion of the minor will be certified by the MOLB-ILS Program. A grade of “B” or better is required of all minor courses. **(Please attach a copy of your transcript with all completed courses – thank you.)**

[illegible]

- See Minor Requirements Attached

**Dr. Jennifer Randall, MOLB-ILS Director-** *(Revised: 8/2019)*

STUDENT NAME: \_\_\_\_\_ (**Attach Transcript**)  
 ADVISOR NAME: \_\_\_\_\_

**GRADUATE MINOR**  
**MOLECULAR BIOLOGY & INTERDISCIPLINARY LIFE SCIENCES**  
**GRADUATE PROGRAM (MOLB-ILS)**

This program consists of a minimum of 10 credit hours including:

- MOLB 545 Molecular and Biochemical Genetics, 3 credits
- MOLB 590 Research seminar, 1 credit
- MOLB 520 Molecular Cell Biology, **OR** MOLB 542 Biochemistry I 3 credits
- Any Tier II course or Core Course, 3 credits

A minimum grade of B is required in all courses. At least one member of the student's Graduate Committee must be a faculty member approved as a MOLB-ILS active participant (see Graduate Catalog listing of faculty under MOLB-ILS).

**Tier II Courses**

**At least 9 credits are required of all students from the following list of courses:**

<b>AGRO /HORT /MOLB</b>	Plant Genetics	3 Credits
<b>506AGRO 516</b>	Molecular Analysis of Complex Traits Plant	3 Credits
<b>AGRO/HORT 531</b>	Physiology: Growth and DevelopmentPlant	3 Credits
<b>AGRO/ HORT/ MOLB 685</b>	Genetic Engineering	3 Credits
<b>ANSC 602</b>	Advanced Reproductive Physiology	3 Credits
<b>ANSC 602L</b>	Molecular Techniques in Reproductive Physiology	2 Credits
<b>ANSC 621</b>	Metabolic Functions and Dysfunctions	3 Credits
<b>BCHE 546 / MOLB 546</b>	Biochemistry II	3 Credits
<b>BCHE 645</b>	Nucleic Acid Metabolism	3 Credits
<b>BCHE 647</b>	Physical Biochemistry	3 Credits
<b>BCHE 648</b>	Proteins and Enzymes	3 Credits
<b>BIOL 451</b>	Physiology of Microorganisms	3 Credits
<b>BIOL 470</b>	Developmental Biology	3 Credits
<b>BIOL 474</b>	Immunology	3 Credits
	Virology	3 Credits

<b>BIOL 477</b>	Applied and Environmental Microbiology	4 Credits
<b>BIOL 478</b>	Molecular Biology of Microorganisms (offered fall only)	3 Credits
<b>BIOL 482</b>	Molecular Systematics	3 Credits
<b>BIOL 490</b>	Neurobiology	3 Credits
<b>BIOL 520 / MOLB 520</b>	Discussions in Molecular Biology	1 Credit
<b>BIOL 523</b>	Mechanisms of Microbial Pathogenicity	3 Credits
<b>BIOL 540 / MOLB 540</b>	Science and Ethics or equivalent (typically offered in spring)	1 - 3 Credits
<b>BIOL 541</b>	Professional Development Seminar	1 Credit
<b>BIOL 541</b>	Advanced Genetic Aspects of Population Biology	3 Credits
<b>BIOL 550</b>	Molecular Biology of Disease Vectors - with committee/instructor consent or equivalent	3 Credits
<b>BIOL 550</b>	Genomics Techniques in Life Sciences -Dr. Xu	3 Credits
<b>BIOL 550</b>	Bioinformatics Applications & Databases - Dr. Xu	3 Credits
<b>BIOL 577</b>	Adv. Topics Environmental Microbiology	3 Credits
<b>BIOL 590</b>	Neuroscience - special topics	1 – 3 Credits
<b>BIOL 591</b>	Principles of Confocal Microscopy	1 Credit
<b>BIOL 592</b>	Microscopy Practicum	1 – 3 Credits
<b>BIOL 698</b>	Selected Topics	1 – 3 Credits
<b>CHEM 516</b>	Advanced Organic Chemistry I, Physical Organic Chemistry	3 Credits
<b>CHEM 517</b>	Advanced Organic Chemistry II, Synthetic Organic Chemistry	3 Credits
<b>EPWS 486</b>	Plant Virology	3 Credits
<b>GENE 486</b>	Genes and Genome	3 Credits
<b>MOLB 450</b>	Special Topics in Molecular and Cellular Biology	1 - 3 Credits
<b>MOLB 452</b>	Independent Studies in Bioinformatics	1 - 3 Credits
<b>MOLB 470</b>	Genome Analysis and Bioinformatics, or equivalent	1 - 3 Credits
<b>MOLB/AGRO/HORT 506</b>	Plant Genetics	1 - 3 Credits
<b>MOLB 520 / BIOL 520</b>	Discussions in Molecular Biology	1 Credit
<b>MOLB 530</b>	Plant Physiology: Metabolism	3 Credits
<b>MOLB 540 / BIOL 540</b>	Science and Ethics, or equivalent	1 - 3 Credits
<b>MOLB 546 / BCHE 546</b>	Biochemistry II	3 Credits
<b>MOLB 550</b>	Special Topics in Molecular Biology – with committee/instructor consent or equivalent	1 - 3 Credits
<b>MOLB 571</b>	Molecular and Cellular Mycology	3 Credits
<b>MOLB 590</b>	Discussions in Molecular Biology	1 Credit
<b>MOLB 599</b>	<b>(6 Thesis Research Credits)</b>	6 Credits

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**MOLB 650****Advanced Topics in Molecular Biology****1 - 3 Credits**

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(Revised: 08/2019)