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WSU Registrar

Washington State University  
MAJOR CHANGE FORM - - REQUIREMENTS

(Submit original signed form and TEN copies to the Registrar's Office, zip 1035.)  
See <https://www.ronet.wsu.edu/ROPubs/Apps/HomePage.ASP> for this form.

\*Submit an additional copy to the Faculty Senate Office, French Administration 338, zip 1038.

Department Name School of Molecular Biosciences

1. CHECK PROPOSED CHANGES.

- \*  Change department/program name from \_\_\_\_\_ to \_\_\_\_\_
- \*  New degree or program in \_\_\_\_\_
- \*  Change name of degree from \_\_\_\_\_ to \_\_\_\_\_
- \*  Drop degree or program in \_\_\_\_\_
- \*  Extend existing degree or program to \_\_\_\_\_ campus
- New Major in \_\_\_\_\_
- Change name of Major from \_\_\_\_\_ to \_\_\_\_\_
- Revise Major requirements in Ph.D. in Molecular Biosciences
- Drop Major in \_\_\_\_\_
- Revise certification requirements for the Major in \_\_\_\_\_
- New Option in \_\_\_\_\_
- Revise requirements for the Option in \_\_\_\_\_
- Drop Option in \_\_\_\_\_
- New Minor in \_\_\_\_\_
- Revise Minor requirements in \_\_\_\_\_
- Drop Minor in \_\_\_\_\_
- New Undergraduate Certificate in \_\_\_\_\_
- Revise Undergraduate Certificate requirements in \_\_\_\_\_
- Drop Undergraduate Certificate in \_\_\_\_\_
- Other \_\_\_\_\_

Effective term/year Fall 2014

Dr. Mary Hunzicker-Dunn	335-5614	mehd@wsu.edu
<b>Contact Person</b>	<b>Contact Phone No.</b>	<b>Contact email</b>

2. GIVE REASONS FOR EACH REQUEST MARKED ABOVE. (Attach additional paper if necessary; see reverse side.) See attached.

4. SIGN AND DATE APPROVALS.

MSD / Sept 16 2013      SKD / 9-20-13      \_\_\_\_\_  
 Chair Signature/date      Dean Signature/date      General Education Com/date  
OCT 10 2013  
 \_\_\_\_\_  
 Catalog Subcom/date      Academic Affairs Com/date      Graduate Studies Com/date      Senate/Date

VGS

**MEMORANDUM**

**TO:** Bill Andrefsky, Dean, The Graduate School

**FROM:** Mary Hunzicker-Dunn, Associate Director, School of Molecular Biosciences (SMB)

*Mary Hunzicker-Dunn*

**DATE:** September 16, 2013

**SUBJECT:** Reducing number of graded credits required for PhD degree in SMB

This memo is in response to the policy change of the WSU Graduate School to reduce the required number of graded credits from 21 to 15 for a PhD degree. The SMB is requesting a reduction to 15 graded credits for the Molecular Biosciences PhD degree. This proposed policy change was formulated by the SMB Graduate Studies Committee; when presented to the faculty, there was a unanimous vote for approval.

The details of this proposal for reducing the required number of graded credits are presented in the attached documents:

1. Summary of the current and proposed requirements
2. Detailed "typical timeline" for the current PhD program
3. Detailed "typical timeline" for the proposed PhD program

The reduction in graded credits was arrived at by two mechanisms. First we will add one discipline specific course, MBioS 574, Protein Biotechnology, to the three current discipline specific courses (MBios 541, General Biochemistry II; MBios 501, Cell Biology; MBios 550, Microbial Physiology). Students take one of these four courses. Second, we are deleting all year two required courses, that include MBioS 508; Quantitative Approaches (2 credits), and two electives (4-7 electives). We are also deleting MBios 507 (2 credits) as a required graded course.

These changes will allow students to complete their didactic coursework within the first year of graduate study, thus reducing time-to-degree. Students will be able to accelerate their focus on research related to their dissertation.

## Summary of Current and Proposed graded credit hours for the PhD in Molecular Biosciences

### Current Program Requirements

#### Didactic graded course work (21 credits):

MBioS 503 – Molecular Biology I – 3 credits

MBioS 504 – Molecular Biology II – 3 credits

MBioS 513 – General Biochemistry I – 3 credits

\*MBioS 507 – Critical Analysis of Scientific Literature – 2 credits

\*MBioS 508 – Quantitative Approaches in Molecular Biosciences – 2 credits

Discipline-specific course, either:

MBioS 514 – (Biochem) General Biochemistry II – 3 credits

MBioS 501 – (GenCB) Cell Biology – 3 credits; MBioS 529 – Selected Topics in Cell Biology – 1 credit

MBioS 550 – (Micro) Microbial Physiology – 3 credits

Elective coursework –4 to 7 credits, typically two courses

#### Non-didactic course work (11 credits):

MBioS 541 – Research Seminar (P/F) – 1 credit

MBioS 579 – SMB Seminar – (not graded) – 2 credits for each semester, total of 6 credits

MBioS 593 – First Research Proposal (P/F) – 2 credits

MBioS 800 – Second Research Proposal (S/U) - 2 credits

The balance of the credits will be in MBioS 800 – research credits to bring the total program credits to 72 hours.

### Proposed Program Requirements

#### Didactic graded course work (15 credits):

MBioS 503 – Molecular Biology I – 3 credits

MBioS 504 – Molecular Biology II – 3 credits

MBioS 513 – General Biochemistry I – 3 credits

Discipline-specific course, either:

MBioS 514 – (Biochem) General Biochemistry II – 3 credits

MBioS 501 – (GenCB) Cell Biology – 3 credits; MBioS 529 – Selected Topics in Cell Biology (1 credit)

MBioS 550 – (Micro) Microbial Physiology – 3 credits

MBioS 574 – Protein Biotechnology – 3 credits

Elective course – 3 credits

The balance of the credits will be in MBioS 800 – research credits to bring the total program credits to 72 hours.

#### \*The following two courses will remain but will not be required:

MBioS 507 – Critical Analysis of Scientific Literature – 2 credits

MBioS 508 – Quantitative Approaches in Molecular Biosciences – 2 credits

## CURRENT

### TYPICAL TIMELINE OF PHD GRADUATE PROGRAM

SUMMER PRIOR TO FIRST YEAR: Optional 6-week laboratory rotation

### FIRST YEAR

#### A. FIRST SEMESTER

- **Course enrollment (total 12 credit hrs)**

General Biochemistry	MBioS 513	3 credits
Molecular Biology I	MBioS 503	3 credits
Skills in Critical Assessment of Molecular Biosciences Literature	MBioS 507	2 credits
Mini-Seminar	MBioS 541 (S/F)	1 credit
Doctoral Research	MBioS 800 (S/U)	3 credits

- **Two 8-week lab rotations:** complete rotation evaluation form for each.

#### B. SECOND SEMESTER

- **Course enrollment (total 12 credit hrs)**

Molecular Biology II	MBioS 504	3 credits
Discipline specific course	MBioS 514 (Biochem) MBioS 501 (GenCB) MBioS 550 (Micro)	3 credits
Seminar	MBioS 579 (S/F)	2 credits
Doctoral Research	MBioS 800 (S/U)	4 credits

- **Third 8-week lab rotation:** complete rotation evaluation form.
- **Selection of thesis advisor:** Submit a preference list of two potential thesis advisors by the end of the third rotation.
- **Begin dissertation research** to obtain preliminary data for the first research proposal.
- **Choose dissertation committee members** – at least three faculty members in addition to the research advisor. Two members must be core SMB faculty.
- **Hold a thesis committee meeting** before the end of the semester.
- **Complete and submit the annual evaluation form.**

#### C. SUMMER

- **Research** The summer is the first opportunity for a student to carry out research that will count towards her/his degree without the interruptions of classes or teaching. Students are encouraged to make the most of this time to collect preliminary data as well as plan and write their first research proposal.
- **Coursework** If possible, enroll in Phil 530 (Bioethics), a required course, offered in an on-line, blended format.
- **First research proposal (MBioS 593)**  
Follow the SMB Guidelines for Proposals and Guidelines for Proposal I in Section F of the SMB Graduate Handbook.

- **Prepare the "Program of Study"** (form available on the Graduate School website); have this document ready for approval and signing by your committee at the first proposal defense.

## SECOND YEAR

### A. THIRD SEMESTER

- **Course enrollment (Total of 12 credit hrs)**

Research Proposal	MBioS 593 (S/F)	2 credits
Quantitative Approaches in Molecular Biosciences	MBioS 508	2 credits
Phil 530		2 credits
One or two electives	Must have a minimum 21 graded credits for MS degree	2-6 credits
Doctoral Research	MBioS 800 (S/U)	To total of 12 credits

- **Oral defense of the first research proposal (MBioS 593), completed by October 31st.**
- **Have the "Program of Study" signed** by the thesis committee members at the first proposal defense. Deliver signed document to Graduate program coordinator for approval and signing by the Associate Director of Graduate Studies. The Program of Study will then be filed with the Graduate School for final approval.

### B. FOURTH SEMESTER

- **Course enrollment (Total of 12 credit hrs)**

One or two electives	Must have a minimum 21 graded credits for Ph.D. degree	2-6 credits
Phil 530		2 credits
Doctoral Research	MBioS 800 (S/U)	To total of 12 credits

- **Research review by student's dissertation committee in spring semester of each year**
- **Annual review of graduate students at the end of each academic year**

## THIRD YEAR

### A. FIFTH SEMESTER

- **Course enrollment (total of 12 credit hrs)**

Seminar	MBioS 579 (S/F)	2 credits
Doctoral Research	MBioS 800 (S/U)	Up to 10 credits

- **Seminars** Attend student seminars and invited speaker seminars. Present second seminar (MBioS 579) on dissertation research.
- **Prepare Second Proposal (Preliminary Examination)**  
Follow the SMB Guidelines for Proposal and Guidelines for Proposal II in Section F of SMB Graduate Handbook.

## B. SIXTH SEMESTER

- **Stipend level increased to RAI or TAI level** if student has passed "Preliminary Examination (Second Proposal)."
- **All graded course work should be completed.** Student should be eligible for an ABD (all-but-dissertation) tuition waiver if supported by an RA from an external grant. Work with Graduate Academic Coordinator to file the appropriate paperwork with the Graduate School.

- **Course enrollment (total of 12 credit hrs)**

Doctoral Research	MBioS 800 (S/U)	To total of 12 credits
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- **Seminars:** Attend student seminars and invited speaker seminars
- **Research review by the student's thesis committee**
- **Annual review of graduate students**

## FOURTH AND SUBSEQUENT YEARS

- **Course enrollment (total of 12 credit hrs)**

Doctoral Research	MBioS 800 (S/U)	Up to 12 credits
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- **Research review by student's thesis committee**, at least once each year (usually in the Spring)
- **Annual review of graduate students at the end of each academic year.**

## FINAL SEMESTER

- **The beginning of the semester in which you graduate**, apply for graduation through the Graduate School and pay your \$50 graduation fee.
- **Schedule the public seminar and dissertation examination** with committee members and through the Graduate School using the Dissertation/Thesis Scheduling Form. At least ten working days prior to your dissertation defense, submit the signed Dissertation/Thesis Scheduling Form to the Graduate School as well as upload your final draft dissertation in a PDF format to UMI/Proquest.
- **After the defense**, within 5 working days submit your digital thesis in an appropriate electronic format (PDF) to the thesis/dissertation website.

**PROPOSED** (Changes highlighted in red.)

## TYPICAL TIMELINE OF PHD GRADUATE PROGRAM

**SUMMER PRIOR TO FIRST YEAR: 6-week laboratory rotation** (no longer optional)

### **FIRST YEAR**

#### **A. FIRST SEMESTER**

- **Course enrollment (total 12 credit hrs)**

General Biochemistry	MBioS 513	3 credits
Molecular Biology I	MBioS 503	3 credits
Elective		3 credits
Mini-Seminar	MBioS 541 (S/F)	1 credit
Doctoral Research	MBioS 800 (S/U)	3 credits

- **Two 8-week lab rotations:** complete rotation evaluation form for each.
- **Selection of thesis advisor:** Submit a preference list of two potential thesis advisors by the end of the third rotation. (Moved ahead one semester as a result of summer rotation.)

#### **B. SECOND SEMESTER**

- **Course enrollment (total 12 credit hrs)**

Molecular Biology II	MBioS 504	3 credits
Discipline specific course	MBioS 514 (Biochem) MBioS 501 (GenCB) MBioS 550 (Micro) MBioS 574 (Protein Biotech)	3 credits
Seminar	MBioS 579 (S/F)	2 credits
Doctoral Research	MBioS 800 (S/U)	4 credits

- **Begin dissertation research** to obtain preliminary data for the first research proposal.
- **Choose dissertation committee members** – at least three faculty members in addition to the research advisor. Two members must be core SMB faculty.
- **Hold a thesis committee meeting** before the end of the semester.
- **Complete and submit the annual evaluation form.**

#### **C. SUMMER**

- **Research** The summer is the first opportunity for a student to carry out research that will count towards her/his degree without the interruptions of classes or teaching. Students are encouraged to make the most of this time to collect preliminary data as well as plan and write their first research proposal.
- **First research proposal (MBioS 593)**  
Follow the SMB Guidelines for Proposals and Guidelines for Proposal I in Section F of the SMB Graduate Handbook.
- **Prepare the "Program of Study"** (form available on the Graduate School website); have this document ready for approval and signing by your committee at the first proposal defense.

## SECOND YEAR

### A. THIRD SEMESTER

- **Course enrollment (Total of 12 credit hrs)**

Research Proposal	MBioS 593 (S/F)	2 credits
Doctoral Research	MBioS 800 (S/U)	To total of 12 credits

- **Oral defense of the first research proposal (MBioS 593), completed by October 31<sup>st</sup>**
- **Have the "Program of Study" signed** by the thesis committee members at the first proposal defense. Deliver signed document to Graduate program coordinator for approval and signing by the Associate Director of Graduate Studies. The Program of Study will then be filed with the Graduate School for final approval.

### B. FOURTH SEMESTER

- **Course enrollment (Total of 12 credit hrs)**

Doctoral Research	MBioS 800 (S/U)	To total of 12 credits
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- **Research review by student's dissertation committee in spring semester of each year**
- **Annual review of graduate students at the end of each academic year**

## THIRD YEAR

### A. FIFTH SEMESTER

- **Course enrollment (total of 12 credit hrs)**

Seminar	MBioS 579 (S/F)	2 credits
Doctoral Research	MBioS 800 (S/U)	Up to 10 credits

- **Seminars** Attend student seminars and invited speaker seminars. Present second seminar (MBioS 579) on dissertation research.
- **Prepare Second Proposal (Preliminary Examination; MBioS 800)** Follow the SMB Guidelines for Proposal and Guidelines for Proposal II in Section F of SMB Graduate Handbook. **This examination must be completed by December 6<sup>th</sup>.**

### B. SIXTH SEMESTER

- **Stipend level increased to RAI or TAI level** when student has passed "Preliminary Examination (Second Proposal)."
  - **All graded course work should be completed.** Student should be eligible for an ABD (all-but-dissertation) tuition waiver if supported by an RA from an external grant. Work with Graduate Academic Coordinator to file the appropriate paperwork with the Graduate School.
  - **Course enrollment (total of 12 credit hrs)**
- |                   |                 |                        |
|-------------------|-----------------|------------------------|
| Doctoral Research | MBioS 800 (S/U) | To total of 12 credits |
|-------------------|-----------------|------------------------|
- **Seminars:** Attend student seminars and invited speaker seminars
  - **Research review by the student's thesis committee**



- **Annual review of graduate students**

#### **FOURTH AND SUBSEQUENT YEARS**

- **Course enrollment (total of 12 credit hrs)**

Doctoral Research	MBioS 800 (S/U)	Up to 12 credits
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- **Research review by student's thesis committee**, at least once each year (usually in the Spring)
- **Annual review of graduate students at the end of each academic year.**

#### **FINAL SEMESTER**

- **The beginning of the semester in which you graduate**, apply for graduation through the Graduate School and pay your \$50 graduation fee.
- **Schedule the public seminar and dissertation examination** with committee members and through the Graduate School using the Dissertation/Thesis Scheduling Form. At least ten working days prior to your dissertation defense, submit the signed Dissertation/Thesis Scheduling Form to the Graduate School as well as upload your final draft dissertation in a PDF format to UMI/Proquest.
- **After the defense**, within 5 working days submit your digital thesis in an appropriate electronic format (PDF) to the thesis/dissertation website.