Washington State University
MAJOR CHANGE FORM - REQUIREMENTS
(Submit original signed form and ten copies to the Registrar's Office, zip 1035.)
See www.ronet.wsu.edu/ROPubs for this form.

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

Department Name  School of Molecular Biosciences, SMB, College of Sciences

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__________________________________________
   ☐ New Major in______________________________________________________
   ☐ Change name of Major from ____________________________ to ____________________________
   ☐ Revise Major requirements in________________________________________
   ☐ 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 Graduate Certificate in Molecular Biosciences____________________
   Effective term/year ___Spring 2010___________

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

See attached

4. SIGN AND DATE APPROVALS.

_________________________  _________________________  _________________________  _________________________
Chair Signature/date       Dean Signature/date       General Education Com/date

_________________________  _________________________
Catalog Subcom/date         Academic Affairs Com/date

_________________________  _________________________  _________________________
Graduate Studies Com/date   Senate/Date
Graduate Certificate Program
In Molecular Biosciences
School of Molecular Biosciences
College of Sciences

1. Rationale and need for graduate certificate. Target Audience

Molecular Biosciences is an interdisciplinary area melded from the formerly isolated fields of Biochemistry, Cell Biology, Genetics, Microbiology, and Molecular Biology. The intersection of these fields serves as the foundation for much of modern biotechnology, medical research, and interdisciplinary fields like Biological Chemistry and Biological Physics. This certificate relies on a suite of three required graduate courses which cover all aspects of the Molecular Biosciences. In addition, students are required to complete one more elective course depending on the students’ specific broader interests. This course must be from the list of approved elective courses listed or a 400/500 level course chosen by the student and approved by the certificate coordinator. It is expected that proficiency in the graduate certificate courses will further students’ education and be invaluable in career development in many different interdisciplinary fields. In addition on completion of the graduate certificate, undecided students will be better prepared and assisted in their choice to pursue a graduate degree.

A strength of this certificate is that it can be obtained on the Pullman campus or anywhere in the United States through online courses offered by the Distance Degree Programs. Therefore, it will be accessible to all students at WSU’s branch campuses and Learning Centers, as well as place bound, time bound and non-traditional students nationwide. A diverse group of people will have access to this education, including: i) working professionals who seek retraining, ii) non-degree-seeking students, and iii) educators who require continuing education for accreditation purposes. SMB will work with the Graduate Programs Office, Distance Degree Programs, and other units on campus to identify qualified candidates for this certificate. Graduate students in CAHNRS, Vet Med, Molecular Plant Sciences, and other departments in the College of Sciences (e.g. chemistry, physics) are expected to pursue this certificate.

2. Identification of Admission Requirements

A prospective student must possess a baccalaureate degree and have a 3.0 or better grade point average (on a 4.0 scale) or equivalent in the last 60 semester or 90 quarter hours of graded undergraduate work from an accredited college or university. The basic background for graduate study in molecular biosciences is usually provided by an undergraduate degree in biology, biochemistry, cell biology, chemistry, genetics, microbiology, and related fields. The following undergraduate courses are specifically recommended: three semesters of a combination of general biology, microbiology, cell biology, genetics, or molecular biology courses and one semester each of organic chemistry, physics, biochemistry and calculus.

The applicant must apply and be admitted to the Graduate School, fulfilling all of the Graduate School requirements and standards. Students already enrolled in another graduate program at WSU will automatically be eligible to pursue this certificate. Students who intend to only pursue this certificate, whether on campus or via DDP, will be admitted as a “Not-Advanced-Degree-Candidate” (NADC), as defined by the Graduate School.

3. Identification of course requirements

The Graduate Certificate Program in Molecular Biosciences draws solely on existing resources in the School of Molecular Biosciences. The DDP on-line courses required for the certificate are taught, and were developed by SMB faculty.
The Graduate Certificate Program in Molecular Biosciences will include 11-12 credits of graded graduate coursework. Students will be required to complete the following three required courses in the Molecular Biosciences:

- MBioS 501—Cell Biology 3cr.
- MBioS 503—Molecular Biology I 3cr.
- MBioS 513—General Biochemistry I 3cr.

And, to make the Certificate more comprehensive, students will complete one additional course from the following list:

- Phil 530—Bioethics 2cr.
- MBioS 578—Bioinformatics 3cr.
- Stat 412—Biometry 3cr.

On-campus students will take a full year to complete this certificate since MBioS 513, 578 and 503 are offered every fall by SMB, while MBioS 501 is offered in the Spring. DDP students can take any of the three required courses during the Fall, Spring, or Summer semesters. Students must maintain a minimum GPA of 3.0 in coursework required for the completion of this certificate.

4. Identification of members of the graduate faculty associated with the graduate certificate program.

Certificate Faculty will be drawn from the graduate faculty in the School of Molecular Biosciences. Members include:

- John Nilson, Professor and Director, SMB
- Lisa Gloss, Associate Professor and Associate Director, Graduate Studies, SMB
- Bill Davis, Associate Professor and Associate Director, Undergraduate Studies, SMB
- Eric Shelden, Associate Professor, SMB
- Chengtao Her, Associate Professor, SMB
- John Wyrick, Associate Professor, SMB