Compliance Assist: Pharmacology 2015

The Graduate School of Wayne State University has instituted a self-evaluation system for departments offering graduate (MS, PhD) degrees. The system is called Compliance Assist. In this system, the departments formulate mission statements, educational goals, methods of assessing whether the goals are achieved, an annual statement of the progress towards these goals, an action plan for maintaining or remediating this progress, and a timeline for any revisions in the goals or their execution.

This system--as applied to the PhD program--is presented here in its entirety. As the Pharmacology Department does not have any MS students presently, only the mission plan, goals and assessment for this program are described.

PhD Program 2015

Mission Statement

I. Our PhD graduates are given an excellent grounding in basic aspects of the science of pharmacology and their applications in disease. This training qualifies them to teach medical, pharmaceutical and graduate courses in pharmacology. They are given an understanding of the science of pharmacology sufficient to serve as expert consultants.

II. During their dissertation work, our PhD students become experts in the design and execution of experiments that test important hypotheses in biology and biomedicine. Their dissertation research is published in highly respected, peer-reviewed journals. Our PhD graduates are prepared to enter into prestigious post-doctoral training programs and can successfully apply their knowledge and understanding of pharmacology in other opportunities available to highly qualified scientists.

Goals

1. The students shall demonstrate an understanding of biomedical research and a thorough knowledge of basic pharmacology.
2. The students shall be aware of the current literature in pharmacology and related sciences.
3. The students shall plan and execute a series of experiments that will test an original hypothesis.
4. The students shall be able to present their research to an audience of professionals.
5. The students shall be able to write grants to support their research.
6. The students shall be able write manuscripts based on their research for publication in well-recognized journals.

Assessment (Assessment #1 corresponds to Goal #1, etc.)

1. The students shall demonstrate an understanding of biomedical research and a thorough knowledge of basic pharmacology. This goal will be assessed by the achievement of a grade of “B” or higher in the courses IBS 7010, IBS 7020, PHC 7010 and other elective courses.
2. The students shall be aware of the current literature in pharmacology and related sciences. This goal will be assessed at the student’s oral qualifying examination, at biannual meetings with the student’s dissertation committee, and presentations in PHC 7890 (Seminar) and in PHC 7700 (Journal Club).

3. The students shall plan and execute a series of experiments that will test an original hypothesis. This goal will be evaluated at biannual meetings of the student’s dissertation committee and at the student’s dissertation defense.

4. The students shall be able to present their research to an audience of professionals. This goal will be evaluated at an annual Pharmacology Colloquium, at national and international scientific meetings and at the dissertation defense.

5. The students shall be able to write grants to support their research. This goal will be evaluated by the student’s written examination.

6. The students shall be able to write manuscripts based on their research for publication in well-recognized journals. This goal will be evaluated by the student papers in appropriate journals.

Progress/Action Plan/Timeline (Progress/Action Plan/ Timeline #1 correspond to Goal #1, etc.)

1. Progress: All of our 10 students have maintained a “B” or higher score in IBS 7010 and IBS 7020. All but one student have achieved a “B” or better score in PHC 7010. This student took advantage of an opportunity to work in a research laboratory in Europe, and will attend PHC 7010 in the winter semester of 2016. This progress is excellent and timely.

   Action Plan: To maintain this level of excellence, we have to recruit enough excellent students to maintain a critical mass of 9-12.

   Timeline: One student graduated in 2014-2015. We have recruited two excellent students that began in the Department in fall of 2015. We have begun recruitment for academic year 2015-2016.

2. Progress: All 10 of our students received “A” grades in PHC 7700 (Journal Club) indicating a good grasp of current literature. Six of these students have passed their oral exams and are meeting with their dissertation committees biannually. Both the exam and committee reports indicate that the students are current and well versed in the relevant literature. This is excellent and timely progress.

   Action Plan: These efforts are ongoing.

   Timeline: To maintain this level of excellence, Journal Club must continue to be a productive experience and dissertation committees must be comprised of the best and most enthusiastic faculty.

3. Progress: Three of our 10 students have defended their dissertation research and have been awarded their PhD, clear evidence of their research expertise. Three other students are performing their dissertation researches and are in good standing with their dissertation committees. The three first year students have passed their oral exams and began their
dissertation research in autumn of 2015. The student who studied abroad is expected to take her written and oral exams and begin her dissertation research by autumn 2016. This is excellent and timely progress.

Action Plan: To maintain this level of excellence, we must continue to have three semester long research rotations for entering students. We also must continue to have the brightest and most enthusiastic faculty members as mentors and committee members.

Timeline: This is an ongoing effort.

4. Progress: All 10 students presented at the annual Pharmacology Colloquium. Five students presented at national/international meetings. Three successfully defended their dissertation research. This is excellent and timely progress.

Action Plan: To maintain this excellence, students must have opportunities to present their data in public. This can be done by encouraging students to present at the annual Pharmacology Colloquium and encouraging mentors to have their students present at national/international meetings.

Timeline: This is an ongoing process.

5. Progress: Seven of the 10 current students passed their qualifying exams. In this exam, a predoctoral grant application is evaluated by a faculty committee. In addition, two students have been awarded extramural predoctoral grants this year. The student who studied abroad is expected to take her written exam in 2016. The two students who entered our program in August 2015 will take the qualifying exams in 2017.

Action Plan: To maintain this level of excellence requires enthusiasm and energy on the parts of the student and mentor as well as rigorous evaluating committee. One member of the committee retired in October, 2015

Timeline: The vacancy on the committee will be filled in spring, 2016.

6. Progress: This year, five students have had eight manuscript accepted for publication. In addition, other manuscripts are under review. This excellent and timely progress.

Action Plan: This level of excellence depends on matching our students and mentors well. This in turn depends on having three excellent semester long research rotations for entering students.

Timeline: This is a continuing effort.
**MS Program 2014-2015**

**Mission Statement**

1. Our MS graduates are given an excellent grounding in basic aspects of the science of pharmacology and their applications in disease.

2. During their thesis work, our MS students participate in the design and execution of experiments that test important hypotheses in biology and biomedicine. Their thesis research is published in highly respected, peer reviewed journals.

**Goals**

1. The students shall demonstrate an understanding of biomedical research and a thorough knowledge of basic pharmacology.
2. The students shall be aware of the current literature in pharmacology and related sciences.
3. The students shall plan and execute a series of experiments that will test an original hypothesis.
4. The students shall be able to present their research to an audience of professionals.
5. The students shall contribute to manuscripts involving their research for publication in well-recognized journals.

**Assessment**

1. The students shall demonstrate an understanding of biomedical research and a thorough knowledge of basic pharmacology. This goal will be assessed by the achievement of a grade of “B” or higher in BMB 7010, PSL 7010, PSL 7030, PHC 7010 and other elective courses.
2. The students shall be aware of the current literature in pharmacology and related sciences. This goal will be assessed at the student’s oral qualifying examination, at biannual meetings with the student’s MS committee, and presentations in PHC 7890 (Seminar) and in PHC 7700 (Journal Club).
3. The students shall plan and execute a series of experiments that will test an original hypothesis. This goal will be evaluated at biannual meetings of the student’s MS committee and at the student’s MS defense.
4. The students shall be able to present their research to an audience of professionals. This goal will be evaluated at an annual Pharmacology Colloquium, at national and international scientific meetings and at the MS defense.
5. The students shall contribute to manuscripts involving their research for publication in well-recognized journals. This goal will be evaluated by the student contributions to one or more papers in appropriate journals.