

Integrated Bachelor of Arts (BA) or Bachelor of Science (BS) in Biology
and Master of Public Health (MPH)

Purdue University School of Science at IUPUI
Fairbanks School of Public Health at IUPUI
April 15 2015

Integrated Bachelor of Arts (BA) or Bachelor of Science (BS) in Biology
and Master of Public Health (MPH)

Signature Sheet

Signature of the Dean

Purdue University School of Science at IUPUI

Date

Signature of the Dean

Indiana University Fairbanks School of Public Health at IUPUI

Date

Dean of the Graduate School

Date

Provost

Date

Proposal Summary

The Purdue University School of Science, Department of Biology, and the Indiana University Fairbanks School of Public Health at IUPUI propose a five-year, integrated Bachelors/Masters degree program in which both the BA or BS in Biology and the Master of Public Health will be awarded. By designing a curriculum that transitions seamlessly from the Baccalaureate in Biology to the Master of Public Health, the program will graduate students who meet all of the requirements of both degrees. The integrated degree program is also expected to enhance student recruitment and retention for both Schools. Similar programs currently exist at competing institutions in the United States. Importantly, this accelerated program will dramatically increase the employment options and desirability of individuals receiving the degrees.

IUPUI's vision is to be one of the best urban universities, recognized locally, nationally, and internationally for its achievements—and already serves as Indiana's premiere urban research and academic biological and health sciences campus. The campus' mission is to advance the State of Indiana and the intellectual growth of its citizens to the highest levels nationally and internationally through research and creative activity, teaching and learning, and civic engagement. With IUPUI's strong commitment to teaching and research, it promotes the educational, cultural, and economic development of central Indiana and beyond, offering a distinctive range of bachelor's, master's, professional, and doctoral degrees.

Consistent with IUPUI's vision and mission, the proposed program provides students with intensive hands-on experiential and problem-solving learning. The primary benefits of this combined degree program are to broaden students' career horizons by allowing them to receive two degrees in a shorter time frame and at lower costs than it would take to pursue the degrees separately.

This application proposes a fully integrated five-year curriculum, designed to develop the mindset, skills, and abilities to apply fundamental skills in biology towards real-world advanced application of Public Health topics of critical importance to the citizens of Indiana and beyond. Students who complete the program will have greater experience, higher credentials, and be able to contribute more quickly and effectively at their work setting. The integrated five-year BS/MS program has several salient features that are attractive to students and employers, including greater breadth and depth of the fundamentals of both disciplines as well as an application skillset in Public Health; better career growth opportunities; and better preparedness to meet employment opportunities and challenges.

This accelerated, interdisciplinary program is important for attracting science students to graduate studies in Public Health, especially from central Indiana and the U.S. Owing to its accelerated format, the School of Science, Department of Biology and the School of Public Health expect the matriculation of their students will serve to enhance the quality of both the undergraduate and graduate degree programs in which they are enrolled. A sample program of study is included at the end of this document.

Degrees to Be Conferred

Successful students will leave this program with two degrees: a Bachelor of Arts or a Bachelor of Science in Biology and a Master of Public Health. Both programs currently exist in the IUPUI Campus.

Rationale and Demand for this Integrated Degree Program

The five-year program will provide a seamless integration of the breadth of a Biology background in the baccalaureate program with the depth of Master's level coursework. The proposed program minimizes the investment of time and financial resources necessary to fulfill the degree requirements for two degrees while minimizing tuition cost for students. Those who graduate from the integrated Bachelor/Master program will be highly skilled in individual fields of biological study with a focus on prevention and better treatment of diseases affecting large populations and broad interdisciplinary knowledge of approaches to public health challenges.

Biology is a very broad field with many further training and employment opportunities. For example, consider the job of a biological technician, which is an entry-level job for the BS in Biology graduate. Biological technicians help biological and medical scientists conduct laboratory tests and experiments. According to the National Bureau of Labor Statistics (BLS), the median annual wage for biological technicians was \$39,750 in May 2012. Employment of biological technicians is projected to grow 10% from 2012 to 2022, about as fast as the average for all occupations.

Public Health is the science of protecting and improving the health of communities through education, promotion of healthy lifestyles, and research for disease and injury prevention. Public health professionals analyze the effect on health of genetics, personal choice and the environment in order to develop programs that protect the health of your family and community. Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country. Public health professionals try to prevent problems from happening or re-occurring through implementing educational programs, developing policies, administering services, regulating health systems and some health professions, and conducting research, in contrast to clinical professionals, such as doctors and nurses, who focus primarily on treating individuals after they become sick or injured. It is also a field that is concerned with limiting health disparities and a large part of public health is the fight for health care equity, quality, and accessibility. The 45 credit Master of Public Health (MPH) degree offers five concentration areas: Biostatistics, Environmental Health Science, Epidemiology, Social and Behavioral Sciences, and Health Policy and Management.

Public Health Jobs: A diverse number of occupations fall under the umbrella of public health, including Epidemiology, Environmental health, Health administration, Community health sciences, Health Policy and Management, Global Health, and Maternal and Child Health. Public health touches on almost every aspect of modern life, and MPH graduates have the opportunity to work for a number of employers and in various settings, from governmental positions to positions in the non-profit sector, the private sector, or within academia.

Public Health Projections & Salary: Public health is a booming field. The range of salaries with a MPH degree is higher than many fields, and many employment opportunities exist in Central Indiana. The average starting salary is \$56,000 to \$125,500 annually. ASPH estimates that 250,000 more public health workers will be needed by 2020. There are documented and forecasted shortages of public health physicians, public health nurses, epidemiologists, health care educators, and administrators. It is projected to have a job growth of 21% for all biological scientists during the decade from 2008 to 2018.

Objectives of the Dual-Degree Program

The proposed integrated degree program will provide intensive interdisciplinary education to high quality students who are serious about committing to this unique program. The students will receive two degrees in a shorter time period than it would take to pursue the degrees separately, without dilution of the content of either program. The proposed program will help the Purdue University School of Science and Indiana University School Public Health at IUPUI to recruit and retain superior students who will receive both a degree baccalaureate in Biology and an MPH degree within five years.

Proposed Program Structure

A. Admission requirement. Students will be admitted to the Purdue School of Science under the guidelines that currently exist for admitting BA or BS students. The sequence of courses for the first three years (six semesters) will be the sequence of courses taken by traditional Biology BA or BS majors. The students will be made aware of the option to pursue the integrated degree program during their first year and advised appropriately. The program is intended for Biology students who demonstrate the capacity through their coursework to undertake the academic rigor necessary to be successful in the program. Therefore, only highly motivated students will be advised to enter the integrated degree program.

Students interested in applying for the integrated degree program would formally apply to the program during their fifth semester (fall of the junior year) of their Biology plan of study, and be notified of their acceptance early in the sixth semester (spring of junior year) to properly register for courses in the senior year.

Admission is selective: the Public Health Graduate Admissions Committee evaluates applicants' abilities to succeed academically and their potential to contribute to the field. Candidates for admission to the graduate program would be expected to have completed successfully the first five semesters (at least 75 credit hours) of the baccalaureate degree in Biology, with a cumulative undergraduate GPA of **3.5** or higher. There are no specific undergraduate course prerequisites for entry into the MPH graduate program.

B. Degree Requirements. The proposed curriculum includes all the core undergraduate courses that are currently required for the BA or BS in Biology and all the graduate courses that are currently required for the Master of Public Health.

For reference, the Bachelor of Science in Biology requires 120 hours and the Master of Public Health requires 45 hours, for a total of **165 hours** for the two independent programs. The undergraduate BA or BS in Biology includes **19-21** credit hours of general electives. This accelerated program will replace these elective credit hours with introductory graduate level Public Health courses from the MS program. The graduate level substitutions occur in the 7th and 8th semesters of the student's BS program, with the option to begin in the summer immediately prior to the 7th semester. The graduate level courses satisfy all the degree requirements for the baccalaureate degrees. The integrated program is constructed to exploit an overlap economy, thereby reducing the number of required hours to **144-146 total** for those students awarded the integrated Baccalaureate degree in Biology and the Master of Public Health.

Students in the Master of Public Health graduate program must maintain a minimum cumulative GPA of 3.0 and earn a minimum of a B in every course. If a minimum grade is not earned in a course, that course must be retaken. Graduate students cannot replace a grade; if a course is repeated both grades will be applied toward the cumulative GPA. If the cumulative GPA falls below 3.0, students will be placed on academic probation. Students on probation are required to bring up their average GPA to at least 3.0 by the end of the next semester. Failure to do so will result in dismissal from the Master of Public Health graduate program.

C. Scope and Size of the Program. The program should be attractive to Biology majors: there have been inquiries on using the graduate courses taken in students' senior years towards a Public Health degree. Strategic marketing of the program to freshman and sophomore Biology students will emphasize the academic strengths of the program. During the initial years, it is expected that the program would attract at least 10 students per year for a period of three years. This will increase to 20 students per year during the fourth and following years. The first group of students will graduate after the fifth year following the start of the program.

D. Administrative Structure. There will be two plans of study for students in this program: 1) A Bachelor of Arts or Bachelor of Science in Biology plan of study that will include a minimum of **15 credit hours** of Public Health graduate courses to be taken in place of the undergraduate general electives; and 2) a Master of Public Health plan of study that will be completed after the completion of the BA/BS plan of study and degree (normally in the ninth semester). Academic Advisors in Biology and Public Health will provide academic support to students in the undergraduate and graduate portions of the program, respectively, with students meeting with both Public Health and Biology advisors, as needed, during the last two years of baccalaureate study.

The two plans of study to be maintained are attached to this document, where the **five to six overlapping courses (15-18 credit hours)** are indicated in both Baccalaureate plans. The granting of the baccalaureate degree will be awarded at the end of the 4th year, upon completion of all baccalaureate requirements in the School of Science, with the Master of Public Health awarded the following year. A sample plan illustrating a semester-by-semester distribution of the courses is also attached.

After admission to the accelerated Master of Public Health program, the Graduate Committee will assess the student's performance at the end of each semester to ensure that the student's performance is at the level expected for traditional Master of Public Health graduate program. If a student's performance is judged by the Graduate Committee to be unsatisfactory for the integrated degree program, the student will still be able to receive a BA/ BS in Biology upon completion of all the requirements of that degree.

Evaluation Plan

The Integrated Bachelor of Arts (BA) or Bachelor of Science (BS) in Biology and Master of Public Health (MPH) program will be reviewed each year by a joint committee composed of members of the School of Science's Department of Biology and the Fairbanks School of Public Health. The program, its specializations, and individual courses shall be assessed based on their respective student learning outcomes by direct and indirect measures and with reference to the Principles of Undergraduate Learning and the Principles of Graduate and Professional Learning. Evaluations of the program will take place through periodic internal and external reviews as part of the continuous quality improvement process in each of the schools.

Sustainability and Impact on the State and Region

The proposed program requires no additional resources or financial support from the school and campus. The key to the success of the program is to make prospective students aware of the availability of the program when they enter the undergraduate Biology program. The seamless transition from undergraduate to graduate programs will greatly reduce the time needed to complete the two degrees when compared with traditional, separate BS and MS degree programs. This proposed program is, therefore, economical and sustainable in the long run.

As our city, state, and nation are increasingly dependent on a health-based economy, we continue to see a critical need for well-educated, trained, high quality public health professionals with advanced graduate degrees. We fully expect graduates from the Integrated Bachelor/Master program to have a major impact on central Indiana, the state of Indiana, and the greater Midwest.

Staffing and Infrastructure.

Because the program uses existing courses, faculty, and facilities, no additional resources are required.

IUPUI Degree Map
Program: 4+1BA in Biology + Master in Public Health

| First Year | | | | | | | |
|--|------------------------------|---------|---------------|---|---------------------------------|---------|---------------|
| Fall Semester | | | | Spring Semester | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major | BIOL--K101 | 5 | C-- | Major | BIOL--K103 | 5 | C-- |
| SoS Phys/Biol Sci GE Life/Phys Sci | CHEM--C105 CHEM--C125 | 3/2 | C-- | SoS Phys/Biol Sci GE Life/Phys Sci | CHEM--C106 CHEM--C126 | 3/2 | C-- |
| SoS Math GE Analytical/Math | MATH 15300 | 3 | C-- | SoS Math GE Analytical/Math | MATH 15400 | 3 | C-- |
| SoS First Yr Seminar | SCI--I120 | 1 | D - | SoS Comm GE Core Comm | ENG--W131 | 3 | C |
| Total Credits | 14 | | | Total Credits | 16 | | |
| Cumulative Total | 14 | | | Cumulative Total | 30 | | |
| Second Year | | | | | | | |
| Fall Semester | | | | Spring Semester | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major Biology Genetics Lecture/Lab* | BIOL--K322 BIOL--K323 | 3/2 | C-- | Major Biology Cellular Lecture/Lab* | BIOL--K324 BIOL--K325 | 3/2 | C-- |
| SoS Phys/Biol Sci | CHEM--C341 | 3 | C-- | SoS Phys/Biol Sci | CHEM--C342 | 3 | C-- |
| SoS Phys/Biol Sci | CHEM--C343 | 2 | C-- | SoS Comm | 2 nd Written Comp | 3 | C |
| GE Cultural Understanding | WLAC | 4 | D-- | GE Cultural Understanding | WLAC | 4 | D-- |
| Total Credits | 14 | | | Total Credits | 15 | | |
| Cumulative Total | 44 | | | Cumulative Total | 59 | | |
| Third Year | | | | | | | |
| Fall Semester | | | | Spring Semester | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major Biology Molecular Lecture/Lab* | BIOL--KXXX (Lab optional) | 3/2 | C-- | Major Biology Organismal Lecture/Lab* | BIOL--KXXX (Lab optional) | 3/1 | C-- |
| GE Arts & Hum/SS | Choose from list | 3 | D-- | GE Arts & Hum/SS | Choose from list | 3 | D- |
| SoS Phys/Biol Sci | PHYS--P201 | 5 | C- | SoS Phys/Biol Sci | PHYS--P202 | 5 | C-- |
| SoS Comm GE Core Comm | COMM--R110 | 3 | D-- | GE Arts & Hum/SS | Approve with Advisor | 3 | D-- |
| Total Credits | 16 | | | Total Credits | 15 | | |
| Cumulative Total | 75 | | | Cumulative Total | 90 | | |
| Student Applies To MPH Program | | | | Student Admitted To MPH Program | | | |

Note: The 5 required core courses (15 credit hours) to be taken in the summer or fall of the Senior Year that apply to both the Baccalaureate Degree and the Master in Public Health are:

- PBHL-S 500: Social and Behavioral Health Science in Public Health
- PBHL-H 501: U.S. Health Care Systems and Health Policy
- PBHL-E 517: Fundamentals of Epidemiology
- PBHL-A 519: Environmental Science in Public Health
- PBHL-B 551: Biostatistics for Public Health

One of these two additional recommended courses may be taken in the undergraduate plan of study :

- PBHL-A661: Environmental Toxicology
- PBHL-A662: Environmental Health Risk Assessment

| Fourth Year | | | | | | | |
|------------------------------------|--------------------------|---------|---------------|----------------------------------|---|---------|---------------|
| Fall Semester | | | | Spring Semester | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major Biology Ecology Lecture/Lab* | BIOL---K341 | 3/2 | C- | Major Capstone Course | BIOL---K490 or BIOL---K493 | 1 | C- |
| Elective/ MS Degree #1 | PBHL-S 500 | 3 | B | Elective/ MS Degree #4 & #5 & #6 | PBHL-A 519 PBHL-B 551 PBHL-A 662 | 9 | B B B |
| Elective/ MS Degree #2 | PBHL-H 501 | 3 | B | Elective | Consult with Adv. CSCI---N207 or N200, N201, N211 | 2 | C-- |
| Elective/ MS Degree #3 | PBHL-E 517 | 3 | B | SOS Computer Prog | | 3 | C-- |
| Elective/ MS Degree #3 | | | | Candidate for Graduation | CAND 99100 | 0 | |
| Total Credits | 14-15 (9 in PBHL) | | | Total Credits | 15 (9 in PBHL) | | |
| Cumulative Total | 105 | | | Cumulative Total | 120 | | |

| SUMMER (optional) | | | | | | | |
|-------------------|-----------------------------|---------|---------------|------------------|----------------------|---------|---------------|
| Summer I | | | | Summer II | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| | Internship in Public Health | | | | Master's Degree (#7) | 3 | B |
| Total Credits | | | | Total Credits | 3 | | |
| Cumulative Total | | | | Cumulative Total | 123 | | |

| Fifth Year | | | | | | | |
|----------------------------|----------------------|---------|---------------|-------------------------------|--------------------------------|---------|---------------|
| Fall Semester – Semester 9 | | | | Spring Semester – Semester 10 | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| | Master's Degree (#8) | 3 | B | | Master's Degree (#12) | 3 | B |
| | Master's Degree #9) | 3 | B | | Master's Degree (#13) | 3 | B |
| | Master's Degree #10) | 3 | B | | Master's Degree (#14) | 3 | B |
| | Master's Degree #11) | | | | Master's Degree (#15)/ Project | 3 | B |
| Total Credits | 12 | | | Total Credits | 12 | | |
| Cumulative Total | 135 | | | Cumulative Total | 147 | | |

***Select 4 upper---level labs to accompany lecture areas.**

- **Critical Courses are printed in bold font.** Critical courses are required (or expected) within the first two years of a degree program as they either serve as important prerequisites or provide foundational knowledge for the degree.
- This plan is based upon the expectation that students will complete 30 credits hours of course work per year. Enrollment in summer terms may be necessary to ensure on-time graduation.
- An overall C (2.00) GPA average is required in the 30 credit hours of the general education common core.
- 30 hours of biology for majors (BIOL-K classes) required; **3 labs beyond K101/K103.**
- **120 credits required for BS, 45 credits required for MS; Integrated Program = 144-147 cr. hr**
- Overall 2.00 GPA required; 2.00 required in biology with no grade lower than a C-.
- 32 hours at the 300+ level completed at IUPUI required.

Key to Abbreviations

- | | |
|---|----------------------|
| ➤➤ GE – General Education Common Core Requirement | Comm---Communication |
| ➤➤ SoS – Baccalaureate Requirement | Phys -- Physical |
| ➤➤ Major – Program Requirement | Sci--Science |
| ➤➤ WLAC – World Languages and Cultures | Biol – Biological |
| ➤➤ Hum – Humanities | SS – Social Sciences |
| ➤➤ | |

IUPUI Degree Map
Program: 4+1 BS in Biology + Master in Public Health

| First Year | | | | | | | |
|------------------------------|--------------------------------|---------|---------------|------------------------------|---------------------------------|---------|---------------|
| Fall Semester – Semester 1 | | | | Spring Semester – Semester 2 | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major | BIOL---K101 | 5 | C- | Major | BIOL---K103 | 5 | C- |
| SoS Phys/Biol Sci | CHEM---C105 | 3+2 | C- | SoS Phys/Biol Sci | CHEM---C106 | 3+2 | C- |
| GE Life/Phys Sci | CHEM---C125 | | | GE Life/Phys Sci | CHEM---C126 | | |
| SoS Math | MATH 23100 | 3 | C- | SoS Math | MATH 23200 | 3 | C- |
| GE Analytical/Math | | | | GE Analytical/Math | | | |
| SoS First Yr Seminar | SCI---I120 | 1 | D- | SoS Comm | ENG---W131 | 3 | C |
| | | | | GE Core Comm | | | |
| Total Credits | 14 | | | Total Credits | 16 | | |
| Cumulative Total | 14 | | | Cumulative Total | 30 | | |
| Second Year | | | | | | | |
| Fall Semester – Semester 3 | | | | Spring Semester – Semester 4 | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major Biology | BIOL K322 | 3+2 | C- | Major Biology | BIOL-K323 | 3+2 | C- |
| Genetics | BIOL-K323 | | | Cellular lecture/Lab* | BIOL-K324 | | |
| Lecture/Lab* | | | | | | | |
| GE Arts/Hum/SS | Choose from list | 3 | C | SoS Comm: | Recommend | 3 | C |
| | | | | 2 nd Written Comp | TCM 320 | | |
| SoS Phys/Biol Sci | CHEM-C341 | 3 | C- | SoS Phys/Biol Sci | CHEM---C342 | 3 | C- |
| SoS Phys/Biol Sci | CHEM-C343 | 2 | C- | SoS Phys/Biol Sci | CHEM---C344 | 2 | C- |
| GE Cultural Understanding | Choose from List | 3 | | SOS Computer Prog | CSCI---N207 or N200,201,211 | 3 | C- |
| Total Credits | 16 | | | Total Credits | 16 | | |
| Cumulative Total | 46 | | | Cumulative Total | 62 | | |
| Third Year | | | | | | | |
| Fall Semester – Semester 5 | | | | Spring Semester – Semester 6 | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major Biology | BIOL---KXXX | 3+2 | C- | Major Biology | BIOL---KXXX | 3+1 | C- |
| Molecular | BIOL---KXXX | | | Organismal | BIOL---KXXX | | |
| Lecture/Lab* | | | | Lecture/Lab* | | | |
| SoS Comm | COMM---R110 | 3 | C | GE Arts/Hum/SS | Choose from list | 3 | C |
| GE Core Comm | | | | | | | |
| SoS Phys/Biol Sci | PHYS---P201 | 5 | C- | SoS Phys/Biol Sci | PHYS---P202 | 5 | C- |
| GE Arts & Hum/SS Course (#1) | Choose from List | 3 | C- | Major Biology (recommended) | BIOL K384 Biochem. | 3 | C- |
| Total Credits | 16 | | | Total Credits | 15 | | |
| Cumulative Total | 78 | | | Cumulative Total | 93 | | |
| | Student Applies To MPH Program | | | | Student Admitted To MPH Program | | |

Note: The 5 required core courses (15 credit hours) to be taken in the summer or fall of the Senior Year that apply to both the Baccalaureate Degree and the Master in Public Health are:

- PBHL-S 500: Social and Behavioral Health Science in Public Health
- PBHL-H 501: U.S. Health Care Systems and Health Policy
- PBHL-E 517: Fundamentals of Epidemiology
- PBHL-A 519: Environmental Science in Public Health
- PBHL-B 551: Biostatistics for Public Health

One of these two additional recommended courses may be taken in the undergraduate plan of study:

- PBHL-A661: Environmental Toxicology
- PBHL-A662: Environmental Health Risk Assessment

| Fourth Year | | | | | | | |
|----------------------------|-----------------------------|---------|---------------|---------------------------------|------------------------------------|---------|---------------|
| Fall Semester – Semester 7 | | | | Spring Semester – Semester 8 | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| Major Biology Lecture/Lab* | BIOL---K341 BIOL---K342 | 3+2 | C- | Major Biology Research / Thesis | BIOL---K493 BIOL---K494 | 1+1 | C- |
| Major Biology Research | BIOL---K493 | 1 | C- | Elective/ MS Degree #4 | PBHL-A 519 | 3 | B |
| Elective/ MS Degree #1 | PBHL-S 500 | 3 | B | Elective/ MS Degree #5 | PBHL-B 551 | 3 | B |
| Elective/ MS Degree #2 | PBHL-H 501 | 3 | B | Elective/ MS Degree #6 | PBHL-A 662 | 3 | B |
| Elective/ MS Degree #3 | PBHL-E 517 | 3 | B | Elective/ MS Degree #7 | PBHL- | 3 | B- |
| | | | | Candidate for Graduation | CAND 99100 | 0 | |
| Total Credits | 15 | | | Total Credits | 14 | | |
| Cumulative Total | 108 | | | Cumulative Total | 122 | | |
| SUMMER | | | | | | | |
| Summer I | | | | Summer II | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| | Internship in Public Health | | | Master's Degree (#8) | | 3 | B- |
| Total Credits | | | | Total Credits | 3 | | |
| Cumulative Total | | | | Cumulative Total | 125 | | |
| Fifth Year | | | | | | | |
| Fall Semester – Semester 9 | | | | Spring Semester – Semester 10 | | | |
| Description | Course | Credits | Minimum Grade | Description | Course | Credits | Minimum Grade |
| | Master's Degree (#9) | 3 | B- | | Master's Degree #12) | 3 | B- |
| | Master's Degree #10) | 3 | B- | | Master's Degree #13) | 3 | B- |
| | Master's Degree #11) | 3 | B- | | Master's Degree #14) | 3 | B- |
| | | | | | Master's Degree #15 Project/Thesis | 3 | B- |
| Total Credits | 9 | | | Total Credits | 12 | | |
| Cumulative Total | 134 | | | Cumulative Total | 146 | | |

***Select 4 upper---level labs to accompany lecture areas.**

- **Critical Courses are printed in bold font.** Critical courses are required (or expected) within the first two years of a degree program as they either serve as important prerequisites or provide foundational knowledge for the degree.
- This plan is based upon the expectation that students will complete 30 credits hours of course work per year. Enrollment in summer terms may be necessary to ensure on-time graduation.
- An overall C (2.00) GPA average is required in the 30 credit hours of the general education common core.
- 40 hours of biology for majors (BIOL-K classes) required; 4 labs beyond K101/K103.
- **120 credits required for BS, 36 credits required for MS**
- Overall 2.00 GPA required; 2.00 required in biology with no grade lower than a C-.
- 32 hours at the 300+ level completed at IUPUI required.

Key to Abbreviations

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| ➤➤ GE – General Education Common Core Requirement | Comm---Communication |
| ➤➤ SoS – Baccalaureate Requirement | Phys -- Physical |
| ➤➤ Major – Program Requirement | Sci--Science |
| ➤➤ WLAC – World Languages and Cultures | Biol – Biological |
| ➤➤ Hum – Humanities | SS – Social Sciences |
| ➤➤ | |