Concentration: Applied Microbiology- Honors Track

The Applied Microbiology biotin prepares you for professional positions in algal biofuels, environmental monitoring and improvement, industrial applications of microbiology, food sanitation, research or graduate study.

**HONORS COLLEGE:**

The highlighted courses reflect options of Honors Courses to take. The Honors College requires students to take **a total of 18 credit hours** with an **honors designation**, of which at least 9 credits must be upper division (300+). These are classes with an HON prefix or **courses by contract**\*. 3 of the total 18 must be a Senior Capstone experience taken under HON 400 or HON 410 or by contract.

 Not all of the honors courses highlighted are offered every semester. Be sure to talk to your advisor and to check the Honors College website for a list of approved courses for the semester. Go to the Honors College website🡪 For Students tab🡪 Courses or use the Course Lookup Screen and scroll to HON in the drop down menu. Look at the courses being offered in Areas IV (Behavioral Sciences), V (Humanities and Fine Arts) , or Viewing the Wider World. Search for those courses when you register for the semester.

\*Honors Course by Contract: Non-Honors courses may count as upper level Honors courses by contracting the course. An Honors Contract is a mechanism for adding an “honors dimension” to a course that is not listed as an honors course. The contract allows honors students to convert a regular non-honors course that is numbered 300 or higher into an honors course that counts towards graduation with University Honors. If the course is cross-listed as a graduate-level course, students should enroll in the 500 level class. Go to [www.honors.nmsu.edu/for-students/honors-courses-by-contract/](http://www.honors.nmsu.edu/for-students/honors-courses-by-contract/) for more information.

\*\*Masters Accelerated Program: MAP is a program that allows students with a 3.0 GPA or higher to take up to 12 graduate credits during their undergraduate that can be applied towards a Master’s degree. Any 450 level class or above can count towards MAP and it can count as Honors College credits and General University credits. Go to https://honors.nmsu.edu/masters-accelerated-program-map/

**Required Courses:**

BCHE 341 Survey of Biochemistry 4

BIOL311 L General Microbiology Laboratory 2

BIOL 451 Physiology of Microorganisms 3

BIOL 473 Ecology of Microorganisms 3

CHEM 313 Organic Chemistry I 3

CHEM 314 Organic Chemistry II 3

CHEM 315 Organic Chemistry Laboratory 2

EPWS 373 Fungal Biology 3

EPWS 420 Environmental Behavior of Pesticides 3

EPWS 486 Plant Virology 3

MATH 142G Calculus for the Biological and Management Sciences 3

PHYS 211G General Physics I 3

PHYS 212GL General Physics II Laboratory 1

**Select 6-7 credits from the following: 6-7**

A ST 456 Statistical Methods and Data Analysis 3

AGRO 471 Plant Mineral Nutrition 3

BIOL 477 Applied and Environmental Microbiology 4

ES 301 Principles of Ecology 3

ES 370 Environmental Soil Science 3

EPWS 455 Advanced Integrated Pest Management 3

EPWS 462 Parasitology 3

EPWS 481 Plant Nematology 3

EPWS 492 Diagnosing Plant Disorders 3

FSTE 320 Food Microbiology 4

SOIL 252 Soils 3

SOIL 312 Soil Management and Fertility 3

SOIL476 Soil Microbiology 3

TOX 361 Basic Toxicology 3

**Total Credits: 42-43**