**Advising:** It is very important that incoming M.S. students decide whether they want to attend part time or full time and whether they will do the Research Thesis option or the Non-Thesis option. Thesis M.S. students spend a lot of time doing lab work for their thesis while non-thesis students just need to write a literature review paper (>40 pages) as a capstone project for their degree. Thesis M.S. students need to start working on a research project as soon as possible to generate data for their thesis. Dr. Zylstra is available to discuss these options (in person or by email) and to devise a plan to finish the program as quickly as possible.

**Degree Requirements:** M.S. students must complete a minimum of 30 credits. Thesis M.S. students need a minimum of 24 credits of actual coursework and a minimum of 6 credits of 16:682:701/702 Microbial Biology Research. Non-Thesis M.S. students have the option of applying up to 6 credits of research to the 30 minimum required credits. This includes 16:682:691/692 Microbial Biology Nonthesis Study (research for nonthesis students only) and 16:682:641/642 Advanced Special Problems in Microbial Biology (library research project).

**Academics:** Students must register for a minimum of 9 credits for full time status. Under certain circumstances advanced International Students may register for fewer than 9 credits per semester in their second year and still be considered full time (requires permission of Dr. Zylstra and the form [here](#)). Students may register for a maximum of 16 credits per semester so with hard work it is theoretically possible to complete the M.S. program in one year. If you have student loans and are taking less than 9 credits please see Ms. Maguire for an Enrollment Certificate for loan deferment.

**Transitioning to the Ph.D. Program:** M.S. students may petition for transfer to the Ph.D. program after (1) completing the core courses, (2) passing the first year Ph.D. program Comprehensive Exam, and (3) obtaining the strong backing of a research advisor.

**Typical Thesis Option Course Sequence:** (* = required core course)

**Year 1: Fall Semester (9 credits)**

*16:682:501 Microbial Life (3)
*16:682:502 Microbial Biochemistry (3)
*16:682:521 Seminar in Microbiology (1)
*16:682:530 Scientific Conduct/Ethics (1)
16:682:701 Microbial Biology Research (1)

**Year 1: Spring Semester (9 credits)**

*16:682:503 Microbial Physiology (3)
*16:682:504 Microbial Genetics (3)
*16:682:522 Seminar in Microbiology (1)
16:682:702 Microbial Biology Research (2)

**Year 2: Fall Semester**

16:682:701 Research in Microbial Biology
And/Or
Option Elective Courses

**Year 2: Spring Semester**

Any remaining courses or research to finish

The Microbial Biology M.S. program is very flexible so please discuss with Dr. Zylstra alternatives to this typical suggested schedule.

**Very Important:** students who have never taken a college level biochemistry course should discuss with Dr. Zylstra the possibility of taking an undergraduate biochemistry course at Rutgers in their first year and then registering for 16:682:502 Microbial Biochemistry and 16:682:503 Microbial Physiology in their second year.