

Notes for ISP students receiving degrees from McCormick September, 2013

Students entering the McCormick School of Engineering and Applied Science as freshmen may major in Integrated Science, provided that they have been accepted during the university application process by ISP as well as McCormick. In addition to the McCormick B.S. degree they have chosen to pursue, these students will simultaneously be pursuing the ISP major in the Weinberg College of Arts and Sciences (WCAS). They will follow McCormick curriculum requirements rather than Weinberg College B.A. degree requirements. In the rare case where a McCormick/ISP student wishes to obtain both McCormick and WCAS bachelor's degrees, all the requirements of both schools must be completed.

Undergraduate degrees in McCormick, with the exceptions of computer science, applied math, and integrated engineering, are accredited by the national engineering accrediting board called ABET. ABET dictates that at least 18 units of credit be in Engineering Topics and at least 12 units of credit be in Math and Basic Science Topics. A McCormick/ISP student will have more than enough Math and Basic Science Topics credit, but needs to ensure that his or her curriculum carries enough Engineering Topics credit. No WCAS course carries Engineering Topics credit. Many, but not all, McCormick courses carry Engineering Topics credit. The [distribution of these two categories of credit](#) for engineering courses is relevant to the discussion that follows.

First year courses:

McCormick/ISPs will take *Design Thinking and Communication* during the freshman year. However, rather than the *Engineering Analysis* sequence, McCormick/ISPs will take ISP courses in math, physics, and computing. Any student who does not take the four-course *Engineering Analysis* sequence must have five courses to replace it. For ISP students, four required courses (ISP 101, Physics 125-1, Math 281-2 and Math 281-3) accomplish most of this. McCormick/ISPs therefore need one additional course at some point to complete this portion of their McCormick requirements. There are many choices, with the constraint that the additional course must be a course in the ABET Engineering Topics category rather than the Math and Science Topics category.

Engineering Analysis also covers Matlab, which is not taught in ISP 101. McCormick/ISP students may have to learn Matlab on their own so that they can use it in upper level engineering classes.

Overlap between ISP and engineering requirements:

Many McCormick majors require students to take statistics and/or physical chemistry within their Basic Engineering coursework. The statistics and physical science courses listed for McCormick students under Basic Engineering would often be redundant with the ISP statistics (Stat 383) or physical chemistry (Chem 348) courses. McCormick/ISPs should take the ISP courses and [petition](#) McCormick to have these counted in their Basic Engineering requirements. If the course that is being replaced carries ABET Math and Science Topics credit, then the petition will be approved. If the student's major is not accredited by ABET (i.e. computer science, applied math, integrated engineering), then the petition will be approved. However, if the statistics or physical chemistry course that is being replaced is in the ABET Engineering Topics category and the student is in an ABET accredited major, then the petition will need to show that the student's curriculum overall contains at least 18 units of Engineering Topics. In some McCormick majors, this may mean that the student needs to take an additional Engineering Topics course beyond those in the standard departmental curriculum. Students should work this out before approaching their advisers for a signature on the petition.

Biology:

McCormick/ISP students may replace Chem_Eng 275 or Biol_Sci 216 with the ISP course Biol_Sci 240 by petition.