Notes for ISP students receiving degrees from McCormick

Students entering the McCormick School of Engineering and Applied Science as first-years may major in Integrated Science, provided that they have been accepted during the university application process by the Integrated Science Program (ISP) as well as McCormick. In addition to the McCormick B.S. degree that 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 B.S. degree 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. See the Undergraduate Catalog for additional information on the dual degree.

Undergraduate degrees in McCormick, with the exceptions of industrial engineering, computer science, applied math, and integrated engineering, are accredited by the Engineering Accreditation Commission of 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 their 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 (course partitioning) is relevant to the discussion that follows. Students should refer to the ABET course partitioning page for details on partitioning of a specific McCormick class.

First year courses:

McCormick/ISPs will take *Design Thinking and Communication* during their first year. However, rather than the *Engineering Analysis* sequence, McCormick/ISPs will take ISP courses in math and physics, and a COMP_SCI course in computing. Any McCormick student who does not take the four-course *Engineering Analysis* sequence must have credit for the five component courses to replace it. For ISP students, four required courses (COMP_SCI 111*, Physics 125-1, Math 281-2, and Math 281-3) accomplish most of this. McCormick/ISPs therefore need one additional course, taken any time during their four years, to complete this portion of their McCormick requirements. This additional course must also be in the ABET Engineering Topics category rather than the Math and Science Topics category. Some McCormick departments require completion of EA 2 even in cases where they are satisfying the remainder of the EA sequence with the component courses outlined above. Students should consult with their McCormick adviser regarding whether they should take EA 2 or may petition an alternative course.

*Majors with COMP_SCI 111 already listed as a requirement may use COMP_SCI 110 (if completed before COMP_SCI 111) or a higher-level programming course approved by curriculum petition.

Engineering Analysis also covers MATLAB, which is not covered by any ISP course. 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/thermodynamics with the Engineering departments. ISP has similar requirements in these areas taught via ISP-specific courses housed outside of Engineering. Students should discuss with their home McCormick department and ISP whether the ISP courses can be used in place of the standard department requirement or vice versa. In some cases, students may petition the ISP versions to count toward the standard major courses. However, this is not always the case. Some McCormick departments will require completion of their standard degree requirements. In cases

where students would like to request substitutions to the usual Engineering courses, McCormick/ISP students must petition their McCormick department to request the use of ISP courses in place of any standard major requirements. Petitions should be submitted *before* registering for the relevant course.

If 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. On these petitions, it is important that students state that they are aware of the 18 units of engineering requirement and that they will make course selections to ensure they meet the requirement. 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 (e.g. as an unrestricted elective). Students should create their proposed plan for meeting the ABET requirement before approaching their advisers for a signature on the petition.

Students wishing to request that a McCormick course be used in place of a standard ISP requirement should be in touch with the ISP Director before registering to discuss whether such a substitution would be approved.

Biology:

Starting in Spring 2025, McCormick/ISP students pursuing Chemical Engineering may replace Chem_Eng 275 with the ISP course Biol_Sci 240 by petition. McCormick/ISP students pursuing Biomedical Engineering may replace Biol_Sci 201 with the ISP course Biol_Sci 239 by petition. Petitions must be signed by the student's McCormick department and approved for this course replacement to be reflected in the degree audit.

Biotechnology & Biochemical Engineering Minor:

ISP students wishing to pursue the Biotechnology & Biochemical Engineering Minor will complete all the requirements for the minor with one substitution. In addition to the three required labs (Biol_Sci 232, Biol_Sci 233, and Biol_Sci 234), ISP students will take the full sequence of Biol_Sci 239, Biol_Sci 240, and Biol_Sci 241 in place of the non-ISP minor requirements of Biol_Sci 201, Biol_Sci 202, and Biol_Sci 203.

Courses not needing a petition:

All McCormick/ISPs will take certain courses that will be recognized automatically, and do not require a petition.

ISP course	McCormick accepts in place of
Math 281-1	Math 228-1
Math 281-2	Math 228-2 (part of EA replacement)
Math 281-3	Math 250 (part of EA replacement)*
Exempt	Math 240* (content part of Math 281-3)
Physics 125-1	Physics 135-1 (part of EA replacement)
Physics 125-2	Physics 135-2
Physics 125-3	Physics 135-3
Chem 212-1	Chem 215-1
COMP_SCI 111	Part of EA replacement

*Note, Computer Science and Industrial Engineering do not require Math 250/EA 4. For McCormick Computer Science/ISP and Industrial Engineering/ISP students, Math 281-3 will be accepted in place of Math 240.