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“THANKS, I NEEDED THAT!”

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Each year, when high school students register for their next year's schedule of classes, the guidance counselors and teachers of science and mathematics hear the statement, "I don't need science or mathematics for what I plan to do after I graduate." It seems almost impossible to change their minds. One usually says, "You will need it when you get to college or to technical school." But this statement usually falls upon deaf ears because students have made up their minds that in the fields of work to which they aspire they will not need any additional mathematics or science. Besides, statements from science and mathematics teachers are suspect anyway because they are obviously biased.

Perhaps some information about "what is needed" in fields other than science or mathematics is necessary to help them in making these serious decisions. A recent check of the catalogs of the three State Universities was done to see what was required of undergraduate students in majors that supposedly do not involve mathematics or science. The following data is self-explanatory provided the student realizes that a five hour course requires a minimum of five contact hours in class per week per semester or quarter.

University of Northern Iowa (1974-1976)

U.N.I. requires 8-10 semester hours of credit from the areas of biology, chemistry, physics, physical science, earth science, technology, and mathematics for all degrees in all majors offered.

University of Iowa (1974-1976)

The University of Iowa requires 8 semester hours of credit in science and 2½ years of high school mathematics or a score of 23 on the ACT or four semester hours of mathematics in the Liberal Arts College. The following non-science or mathematics majors can be taken in the Liberal Arts College: Afro-American Studies, American Civilization, Anthropology, Art and Art History, Classics, East Asian Language, Economics, Elementary Education, English, European Literature, French, Geography, German, Greek, History, Home Economics, Italian, Journalism, Latin, Letters, Linguistics, Music, Physical Education, Political Science, Portuguese, Psychology, Recreation Education, Religion, Russian, Social Studies, Social Work, Sociology, Spanish, Special Education, Speech and Dramatic Art, and Speech and Hearing Science.

Iowa State University (1973-1975)

I.S.U. is divided into several different colleges each of which requires different credits in science and mathematics for a bachelors degree. The College of Agriculture requires 10-28 quarter hours of biology, 8-16 quarter hours of physical science, and 8-20 quarter hours of mathematics for majors in Agriculture Business, Agriculture Education, Dairy Science, Farm Operation, Food Technology, Landscape Architecture, Outdoor Recreation, Agriculture Administration, and Urban Planning. The College of Home Economics requires 8-21 quarter hours of biology, and 8-22 quarter hours of physical science or mathematics for majors in Advertising Design, Home Economics Journalism, Child Development, Family Environment, Food and Nutrition, Physical Education for Women, and Textiles and Clothing.

The College of Science and Humanities requires 20 hours of natural science and mathematics for all degrees. Natural science would include courses in biology, earth science, physics, chemistry, and mathematics. Students would have to fulfill this requirement to receive a degree in Computer Science, Economics, English, French, German, History, Industrial Administration, International Studies, Journalism, Psychology, Russian, Sociology, Spanish, Speech, Music, Anthropology, and Art.

Summary

It is evident that high school students who have definite college goals, should prepare themselves academically by taking at least two introductory science and two mathematics courses. This is true regardless of where students go to college since many private schools have similar or even more rigorous requirements. Those students who have not made up their minds, and are unsure of the direction in which they want to go, should also prepare themselves academically in the event that they may finally decide to continue their education. Those students who are absolutely sure that they do not want to continue their education beyond high school should be aware that many industries throughout the United States require mathematics or science in order to qualify for certain vocational positions. All students should try to prepare themselves for any direction that their lives may take – college, technical school, a job, or military service – by enrolling in those high school courses that will help them take advantage of future opportunities. They should build their futures on a solid, academic foundation; for when opportunity knocks, only prepared individuals will be able to take advantage of it. Perhaps after reading this some of your students will say, “I didn’t know I needed that.” More important, in future years they may come to you and say, “Thanks, I needed that!”