

Summary of the Results of the ETS MFT in Chemistry Administered Spring 2012

Near the end of the spring semester in 2012 the Chemistry Department administered the ETS Major Field Test (MFT) in chemistry to the department's seven graduating seniors. The results were very positive in all sub-categories of the exam. The overall average for these students placed PLNU at the 89th percentile. Only one student's score placed him at a ranking below the 50 percentile and this student had been involved in a major auto accident that required a year recovery time in the middle of his college career. Because of his time off took his MFT at a time more distant from his freshman and sophomore level coursework. This clearly influenced his scores, particularly his organic chemistry subscore which was his lowest.

Of the other six students, overall percentile ranking ranged from 65 to 96. These were remarkable performances by this obviously well trained group of individuals. The overall rankings were impressive, but equally noteworthy was how well they did on the four individual subset exams. The MFT measures knowledge and understanding in four areas: physical chemistry, organic chemistry, inorganic chemistry, and analytical chemistry. The scores and ranges on each area exam are listed in the table below:

Sub-Area of MFT	Department %tile*	%tile range**	Outlier
Physical chemistry	90	66-94	42
Organic chemistry	78	63-93	13
Inorganic chemistry	89	52-94	32
Analytical chemistry	96	84-97	26
OVERALL	89	65-96	24

* included all seven students **range for six students (without the single outlier)

The area exam scores are clearly well above the national norms and they indicate how well our chemistry majors are being prepared in all areas of chemistry. The organic chemistry scores might warrant further comment. This is one of the most heavily emphasized parts of our curriculum. These students take at least seven lower-division units of organic chemistry and five upper-division units, so they took quite a bit of organic chemistry. It seems reasonable to assume that the slightly lower average on that area exam reflects: 1) a higher expectation of organic chemistry knowledge, and 2) an exit exam administered at a more distant time from the lower-division organic chemistry sequence (typically taken in the sophomore year). We will continue to monitor this ranking into the future but a ranking of 78 percentile is still very good.

We seldom have as many as seven straight chemistry majors graduate in one year, and yet even with this many, it is questionable how much significances we should assign to such a small data set. However, from what is revealed here we can tentative conclude that our curriculum, and the way it is being taught, is serving our student very well and no significant changes are indicated at this time.