

Employment Outlook 2016

- The data reflects a specific set of Standard Occupational Classification System (SOC) codes. The SOC codes cover occupations related to engineering, computer science, information technology, bioinformatics and materials science.
- Sources of information used were the **Oregon Employment Department and IPEDS (Interpostsecondary Educational Data System)**.

Oregon 2005-2006 Graduates

- In the non-duplicative report of Oregon graduates by Classification of Instructional Programs (CIP) codes corresponding to SOC codes chosen:
 - **For 2005-2006 (adding NEW CIPS available)= 1,174**
 - **For 2005-2006 (competitive education)= 460**
 - **Projected for 2016= 1,264 X 10= 11,740**
 - **Projected for 2016= 550 X 10= 4,600**

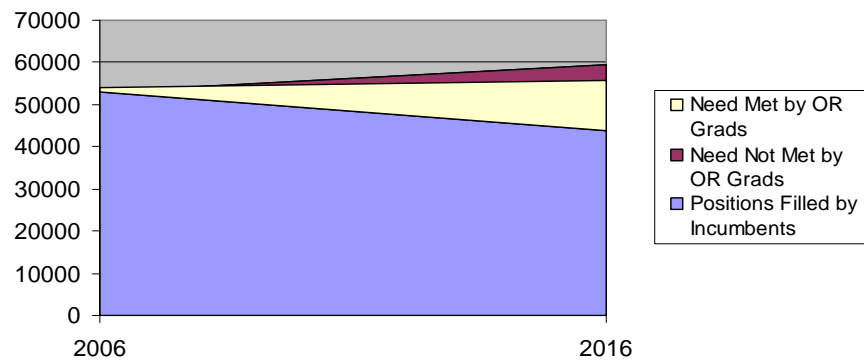
Employment/ Openings Results

- 2006 Employment by SOC Code = **52,906**
- 2016 Employment by SOC Code = **59,611**
- 2016 Forecasted Job Openings due to:
 - Growth = **6,723**
 - Replacement = **8,959**
 - Total = **15,682**

Demand for Engineering & Technology Positions and Need Met by OR Grads

(when including bachelors degrees only)

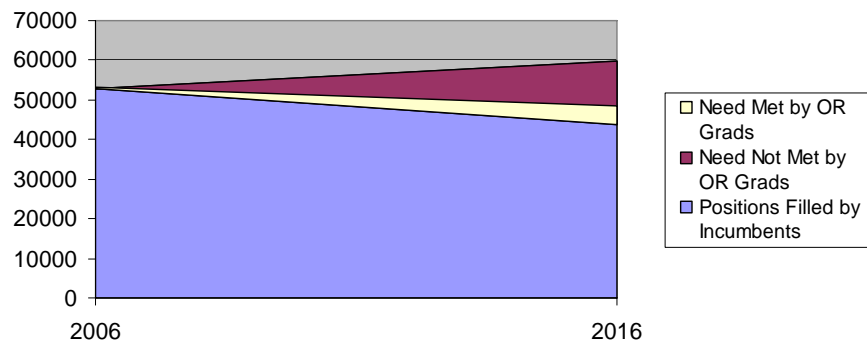
Cream + Purple = Total Demand: replacement & new openings



Demand for Engineering & Technology Positions and Need Met by OR Grads

(when including competitive education only)

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The Plot Thickens...

- We purposefully removed CIPS that were not included in ETIC's scope...
- However, the CIPS we removed corresponded to SOC's that we were using. This was especially problematic with engineering management and engineers, all other positions.
- The next two graphs show the CIPS being added in. This is problematic because it over inflates the Oregon graduates. Many graduates in these CIPS do not go on to careers that fall under ETIC's scope. It's also problematic to a smaller extent, NOT to include them as well.
- Another problem involves competitive education. The competitive education graph is problematic since there are several CIPS with more than one corresponding SOC code (job). Some SOC codes require a bachelors to be competitive, some require a masters. It is difficult to decide when to account for bachelors and when to account for masters degrees. Without advanced mathematical formulas, it's impossible to draw an exact competitive education conclusion.

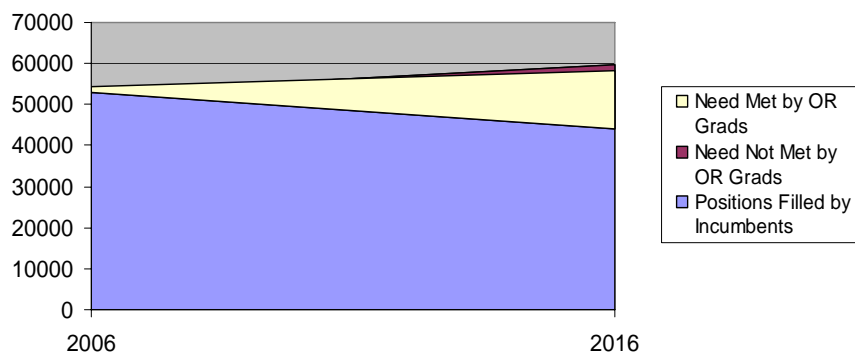
Example: CIP 521201

CIP	SOC	Education	Count
521201 Management Information	113021 Computer and Information Systems Managers	bachelors	131
	151021 Computer Programmers	masters	61
	151061 Database Administrators	masters	61

- For the CIP 521201, Management Information Systems, General...
- You can be employed in 3 different SOC's.
- For competitive education, you only need a bachelors for one career, and for the other two, you need a masters degree.
- For competitive education then, do you over-inflate the Management Information Degree holders by adding both the bachelors and masters degree grads from Oregon, or do you subtract the bachelors and add the masters degrees?
- In this case, I subtracted the bachelors degrees and added the masters degrees since it is a management position and will require a masters more often than a bachelors. However, by leaving out the bachelors degrees, it appears as if Oregon has fewer graduates that can meet the needs of the competitive job market than is likely the case.

Demand for Engineering & Technology Positions and Need Met by OR Grads (when including bachelors degrees only)

Cream + Purple = Total Demand: replacement & new openings



Demand for Engineering & Technology Positions and Need Met by OR Grads (when including competitive education only)

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