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Official Statistics Primer

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This document defines terms used throughout the body of documents published by Institutional Research (IR) to communicate information about staff, faculty, and students to the public, the government, and the LMU community. As there are numerous ways to term the dozens of concepts used in higher education metrics—and few standards—it is meant to make explicit exactly how and why IR counts and calculates things.

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## Average Class Size

Class size can mean different things to different people. To be sure, a faculty member would certainly want credit for teaching a guided research course with an enrollment of one. For workload purposes, it would probably be appropriate to include this course (at least in some fashion). However, parents, students, and members of the public generally think of courses as those entities that meet regularly, have some lecture component to them, and have the possibility of enrollments greater than one. IR uses the term *average class size* more in line with the latter definition. We feel this definition is useful to the largest group of constituents and presents an honest view of how many people are enrolled in a “normal” class.

Specifically, IR uses the following rules to calculate average class size for a given term.

- End-of-term course registration data is extracted from Banner to include every course taken by every student at LMU, as well as many pieces of useful information (used below) about each record.
- Records coded as study abroad at another institution are dropped, because we intend to count courses offered by LMU.
- Withdrawals are dropped.
- Common Data Set exclusion criteria are applied. That is, we do not consider courses classified as distance-learning, non-credit, individualized instruction (e.g., readings, music lessons, dissertation or thesis research), independent study, co-operative programs, internships, foreign language taped tutorials, practicums, and any other intentionally one-on-one course. A current list of these exclusion criteria is available for review at the IR Office.
- Sub-sections are dropped.
- Appropriate “meet-together” sections are unified into single sections. There exist courses that meet together for the lecture portion of the class but at different times for the laboratory portion of the class. By necessity they are given different course numbers in Banner, but for the purposes of calculating an average class size, they are considered a single section because their lecture component meets at the same time and location. There are also “meet-together” sections that have different lecture times but the same lab time and location; these are not combined because their lecture portion is different.
- Cross-listed courses are unified into single sections. Because cross-listed courses meet at the same time and location, their enrollments should be counted together.
- A course is flagged as “undergraduate” if there is at least one undergraduate student enrolled. This is consistent with the Common Data Set rules.
- Remaining records are then counted by subject, course number, and section number in order to obtain class sizes.

- Average class size is then calculated by obtaining the mean of the undergraduate and graduate class sizes.

## Budget

The financial aid student budget is an estimate of each major expense category for a given student and aid year. The financial aid office assigns each applicant a particular institutional budget based on the student's personal characteristics. The five major characteristics used at LMU are books and supplies; personal expenses; room and board; tuition and fees; and local transportation costs.

## Cost of Attendance

The cost of attendance is the total of a student's personalized budget as assigned by the financial aid office. This value is calculated each year a student applies for aid.

## Expected Family Contribution

The amount of money a family (parents or the student) is expected to pay toward the student's cost of attendance. The EFC depends on income, assets, and the cost of attendance. The financial aid office calculates two versions of EFC, one using the federally calculated need and one using the institutionally calculated need.

## Fees

Undergraduates are required to pay Registration, Media, Student Activity, Accident Insurance, and Student Recreation Facility fees. New freshmen also pay a new student orientation fee.

## Indebtedness

Indebtedness measures the total amount of debt accumulated for a "normal" graduate of a program. It is only calculated among graduates, and is typically presented as a mean for a group of graduates in the same time period (e.g., Spring 2010 baccalaureates, or all PT MBA graduates in the 2009-0 academic year). Only debt where the student is the primary borrower is counted in the statistic.

### Undergraduate

All loans except PLUS (parent) loans are counted at the undergraduate level. Indebtedness is generally measured only for those students who began at LMU as new freshmen, because transfer students enter the institution with such varying amounts of credits that presenting an average indebtedness figure would not set necessarily reasonable expectations.

### Graduate

Graduate student indebtedness is calculated in a similar way as for undergraduates, except that it is only done for typical graduate students (see that definition) and that graduate level PLUS loans (GPLU) are counted because the student is the primary borrower.

### Instructional Faculty

In general, *instructional faculty* is defined as those members of the staff whose major regular assignment is instruction, including those with released time for research. Full-time means employed on a full-time basis as determined by Human Resources. Part-time refers any instructor teaching less than a full load of classes (3 per semester), not taking into consideration releases for administrative, research, or public service duties. In general at LMU, part-time refers to adjunct staff hired for less than a full teaching load. The following cases and rules are applied to determine inclusions and exclusions, as well as exceptions for staff and administrators who may have a part-time instructional role but whose regular assignment is not teaching:<sup>1</sup>

| Case   | Full-time | Part-time |
|--|-----------|-----------|
| (a) Instructional faculty clinical medicine, faculty who are not paid (e.g., those who donate their services or are in the military), or research-only faculty, post-doctoral fellows, or pre-doctoral fellows | Exclude   | Include*  |
| (b) Administrative officers (e.g., Registrar, Dean of Students, University Librarian) who may have faculty status  | Exclude   | Include*  |
| (c) Other staff  | Exclude   | Include*  |
| (d) Students who provide instruction, but have titles such as teaching assistant, teaching fellow, and the like  | Exclude   | Exclude   |
| (e) Faculty on sabbatical or leave with pay  | Include   | Exclude   |
| (f) Faculty on leave without pay   | Exclude   | Exclude   |
| (g) Replacement faculty for faculty on sabbatical or leave with pay  | Exclude   | Include   |

\* Only if the person taught at least one non-clinical, for-credit course.

<sup>1</sup> This definition of full-time instructional faculty is used by the American Association of University Professors (AAUP) in its annual Faculty Compensation Survey (the part-time definition is not used by AAUP, but is used by the Common Data Set and thus US News & World Report rankings)

## Residence

IR breaks up students into three geographical origins, (1) in state, (2) out-of-state, and (3) international. The basis for this decision is the original application address (mainly in the case of undergraduates), or the address IR considers the best representation of where a student is from (see the entry on addresses). There are, however, some exceptions to this rule surrounding international addresses. IR defines “international” students as those with non-resident alien status, and thus their residence is their legal country of origin (think passport issuer). Domestic (permanent resident or citizen) students with an international address are assumed to be abroad at the time of application and instead are assigned an in-state value as that is the most-likely case.

## Retention Rate

There is one standard definition the rankings, government, and publication industry uses when they invoke the term “retention.”

IR publishes year-over-year retention statistics yearly, generally after fall census. A retention rate, also called a persistence rate, is the proportion of new freshmen that appear in the census each subsequent year following their entrance to the university. For rankings and federal government reporting, a special calculation is made that removes from the denominator (original class size) students who died, went on an official church mission, or left the university to serve in the military or a foreign aid service. The number of these exceptions is very small, ranging from 0 to 4 students each year. While it serves to improve the retention rate slightly (up to 0.3%), IR takes the position that the more simple measure should be presented in general documents because (1) it is more easily understood, (2) the university does not get complete information about death or reasons for withdrawal, and (3) exceptions may change in the future making comparisons to the past more difficult.

Retention rates are often reported by subcategories of students, such as ethnicity, entering college, or even financial aid status. These subcategories are always measured at the time of entrance to the university (the first census file), or within the first year in the case of financial aid measures.

However, many people expect to see some variations on this definition and, from time to time, IR reports using these alternative definitions. The language IR uses is the following.

### Within-University Retention

This is the standard retention rate cited in most literature. It measures students’ enrollment at the university at the beginning of the subsequent time period (most often one or two years after

matriculation). It is the least restrictive definition because it counts anyone who remains at the institution regardless of what he or she is studying, as long as he or she is still degree-seeking.

#### Within-College Retention

Within-college retention measures whether students who began with a major in a particular college *stayed enrolled in the same college at the beginning of the subsequent time period*. This differs fundamentally from the within-university retention measure that is reported by entering college because it does not count students who switch majors out of the college but still may be enrolled at the institution. Necessarily, within-college retention is more restrictive (and will result in a lower number) than the standard retention measure. The standard retention measure, even if broken down by entering college, counts every student who is still enrolled at the institution even if they switched colleges.

#### Within-Major Retention

Within-major retention measures whether students who began in a particular major continued to pursue that major at the beginning of the subsequent time period. This is the most restrictive of all retention measures because many students switch their starting major. Sometimes this measure is useful for those who want to investigate a university's production in specific fields, such as STEM. IR does not define within-major retention for students entering undeclared or in independent studies programs. Also of note, IR defines the baseline of students in a particular major as those who matriculated in that major for a given fall cohort. Thus, IR does not count students who switch into the major in the rate, nor does IR count students who declare a second or third major after the entering fall term. Although this construct has some value, degree production might be a better measure of success in a given field.

#### Student-to-Faculty Ratio

IR uses the Common Data Set definition of undergraduate student-to-faculty ratio. It is defined as the ratio of full-time equivalent undergraduate students (full-time plus 1/3 part-time) to full-time equivalent instructional faculty (full-time plus 1/3 part-time). In the ratio calculations, IR excludes faculty in stand-alone graduate or professional programs (i.e., faculty with a home department in the School of Education or at Loyola Law School).

#### Students

##### Full Time Equivalent

At the undergraduate and graduate level, IR calculates FTE based on the common data set formula of full-time students plus part-time students divided by three. At the professional level, IR calculates FTE based on the ABA definition of full-time (day) students plus two-thirds the number of part-time (evening) students.

## Graduate

A student who holds a bachelor's or first-professional degree and is taking courses for credit (i.e., not auditing) at the post-baccalaureate level. These students may or may not be enrolled in programs; thus, degree-seeking status does not differentiate students at this level.

### *Typical Graduate Student*

Sometimes it is useful to reduce a set of graduate students to what we call typical graduate students. For certain concepts like time-to-degree or indebtedness, we believe that people envision graduate students who pursue a single program, have no prior graduate school experience (at least as far as we can measure), and who begin and end in the same program (i.e., they didn't waffle back and forth about degree goals).

Each of these special cases introduces bias in the concept we are trying to measure. For example, sometimes students in the School of Education will change from Elementary Education to Secondary Education, but so many of their units overlap that the switchers may graduate in half of the time from declaring their new program as those who first started in Secondary Education. Similarly, some program directors will insist that borderline program applicants try a few courses out as a non-degree student before officially allowing them to be admitted to the program. We exclude them also because they bias the mean downwards due to earning credits prior to their official start. Students who start with two or more programs are probably going to take abnormally longer because they have to spread their effort over more programs. Policy makers and prospective graduate students are better by seeing statistics free of these biases.

### *Exceptions*

For some programs, switching from one program to another is typical, and in these cases we relax that constraint. At LMU, the following starting and ending programs are considered the same for the purposes of determining a typical graduate student: (1) CNSL to GNCS (counseling students often decide to specialize as guidance counselors) and (2) UMCR/USCR to UBED (urban education primary/secondary credential students often later decide to finish with the master's degree).

There are also exceptions for programs in which dual degrees is the norm. In particular the SELP where students earn a master's in engineering and an MBA are counted, but they must have started in both degree programs at the same time (and not added one later).

## Graduate Assistants

Graduate students employed on a part-time basis for the primary purpose of assisting in classroom, laboratory instruction, or in the conduct of research leading to publication. Graduate students having titles such as teaching assistant, teaching associate, teaching fellow, or research assistant typically hold these positions.

### New Freshmen

First-time, full-time students. By first time, we mean students who have no prior postsecondary experience attending any institution for the first time at the undergraduate level. This includes students enrolled in academic or occupational programs. It also includes students enrolled in the fall term who attended college for the first time in the prior summer term, and students who entered with advanced standing (college credits earned before graduation from high school).

### Professional

At LMU, this refers to Loyola Law School students.

### Undergraduate

A student enrolled in an associate's degree program, bachelor's degree program, or vocational / technical program below the baccalaureate level.

### Undergraduate non-degree-seekers

Students enrolled in courses but who are not officially pursuing a degree. ROTC students from other institutions fall into this category.

### Sub-section (of a course)

A subsection of a course is any required part of a course, such as a laboratory, recitation, or discussion group that is supplementary in nature and is scheduled to meet separately from the lecture portion of the course. If a student enrolls in X, must enroll in Y as a co-requisite, and Y is supplementary in nature, then Y is a subsection.

In practice, very few courses at LMU are subsections. Biology 111, a laboratory course frequently taken with Biology 110, is not a mandatory co-requisite and thus is not a subsection, even though almost everyone taking Biology 110 winds up taking Biology 111 anyway. Electrical Engineering 213, on the other hand, is a mandatory part of Electrical Engineering 210, is meant to serve that course exclusively, and is considered a subsection.

### Time to Degree

Time to degree is a construct that measures how long it took a “normal” student to finish a degree or, at the graduate level, a specific program of study. It is only calculated among graduates, and is typically presented as a mean for a group of graduates in the same time period (e.g., Spring 2010 baccalaureates, or all PT MBA graduates in the 2009-0 academic year). We measure time to degree in academic years via a mathematical transformation of the graduation

and starting terms.<sup>2</sup> Absences are included in the time period, as are non-enrolled summer terms. Thus, someone who started in Fall 2001 and ended in Spring 2005 would have a time to degree of 4 academic years (despite it being slightly fewer calendar years because of the trailing summer term).

### Undergraduates

For undergraduates, time to degree is measured only for those students who began at LMU as new freshmen. The time period counted is the duration between their entry term and their first earned baccalaureate, independent of the course of study during that time period (the idea being that major changes are fairly normal at the undergraduate level and we should include them in the average).

### Graduate Students

Graduate student time to degree is calculated in the same way as for undergraduates, except that it is calculated only for typical graduate students (see that definition).

### Tuition Discount

The tuition discount measures the average amount of fees and tuition students are absolved from paying. This can be measured in many ways and for many populations.

Given a population of  $N$  students, the NACUBO component formula for calculating the tuition discount is defined below, where  $Aid_i$  is the total dollars of aid for individual  $i$ , and  $T$  and  $F$  represent the tuition and mandatory fees for the population. Depending on the circumstance, the population might be new freshmen, new transfers, or even the entire undergraduate population. It is generally cited for full-time students, since aid is rarely awarded to part-time students. Essentially, it is the average full-time grants and scholarships award (including students with no aid), divided by the full-time tuition and mandatory fees for a given academic year.

$$D = \frac{\frac{1}{N} \sum_{i=1}^N Aid_i}{T + F}$$

Institutional Research tracks three measures of tuition discounts for different audiences.

*The average student* might want to know what LMU provides toward paying tuition and fees. Parents and students often want to know this kind of tuition discount when they invoke the term, because it yields how much the institution itself is going to contribute to their cost of attendance.

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<sup>2</sup> LMU assigns term suffixes of 30 for fall, 10 for spring, and 22 for summer (concatenated with the calendar year). We define  $D$  to be the difference between the graduation term and the start term,  $ROUND(X,100)$  to be  $X$  rounded to the nearest 100, and the time to degree as  $ROUND(D+50,100)/200+ROUND(D+30,100)/200$ .

This is in contrast to governmental grants or community scholarships the student carries with him or her to the institution. This calculation includes only “Free Money” from LMU. Funded and unfunded sources are included, because from the student’s perspective they are equivalent. In order to provide an estimate for the normal student, athletics aid and tuition remissions are excluded from *Aid*; and aided athletes and tuition remission recipients are excluded from *N*.

*Planning and budget officers* often want to know what LMU has to spend from general revenue in order to attract an additional student, on average. In this case, only unfunded aid is counted because that is the category of aid that has an impact on net revenues. All types of free money are considered in order to calculate this rate, including remissions, grants, athletic aid, and scholarships.

*Policy makers or people interested in the macro perspective* might be curious to know about the portion of fees and tuition that the student or family actually has to pay. Thus, all forms of free money from all sources are considered in calculating this rate, be they institutional, governmental, or community, funded or unfunded.

## Underrepresented Minority

Used to describe the collective body of African American/Black, Hispanic or Latino, and American Indian/Alaskan Native people in a population. This definition is in flux because of the new federal standards on reporting race and ethnicity, because many people are now represented in a “Multi-race” category.

## Unmet Need

A financial aid construct that estimates by how much money a student is “short” in terms of paying for school. Although this can be calculated in many ways, IR defines it to be the student’s Cost of Attendance less the Expected Family Contribution (federal method) less any paid aid (including origination fees on loans).