

What is Student-to-Faculty Ratio (SFR)?

(prepared by Institutional Effectiveness and Analytics, June 4, 2014)

In this explanation, we focus on Student-to-Faculty Ratio (SFR) at the course level. SFR refers to a ratio of full-time equivalent students (FTES) per one full-time equivalent faculty (FTEF):

$$\text{SFR} = \frac{\text{FTES}}{\text{FTEF}}$$

Full-time Equivalent Student (FTES)

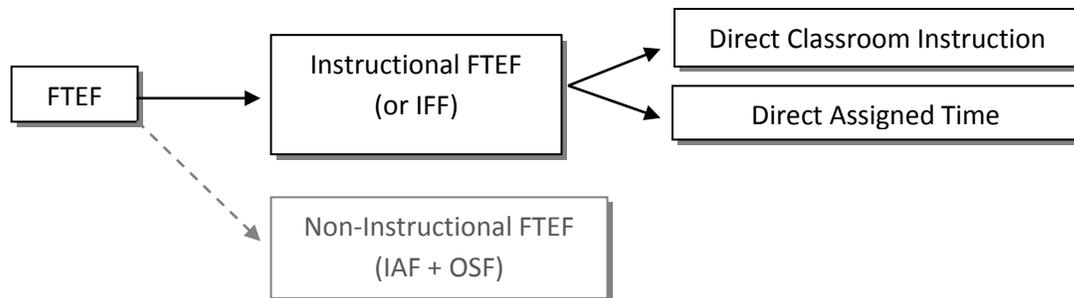
Full-Time Equivalent Students are calculated on the basis of 12 Student Credit Units (SCUs) for master's degree seeking and Ed.D. students, and 15 SCUs for all others. When calculated for a class section, the mix of students (master's degree seeking and others) must be known, since it is the student and not the level of the course which determines the denominator for FTES.

- For master's and Ed.D. students: 1 FTES = SCUs / 12
- For everyone else (e.g., undergraduates, credentials): 1 FTES = SCUs / 15

If a three unit class, for example, has 30 students enrolled (20 undergraduates and 10 master's students), then the undergraduates would generate 60 SCU's and the master's students would generate 30 SCU's. The enrollment generated by the undergrads would be $60/15 = 4.0$ FTES and for the master's students it would be $30/12 = 2.5$ FTES, for a grand total of 6.5 FTES.

Full-time Equivalent Faculty (FTEF)

Full-time Equivalent Faculty reflects both instructional and non-instructional related assignments, measured by weighted teaching unit (WTU).



Note: Non-instructional FTEF is excluded from SFR (student per faculty ratio) calculation.

Instructional FTEF

Instructional FTEF and Instruction Faculty Fraction (IFF) are used interchangeably. It applies to instructional faculty who have a) teaching assignments and b) direct assigned time.

- For tenured/tenure track faculty: 1 Instructional FTEF = 12 WTUs
- For temporary faculty: 1 Instructional FTEF = 15 WTUs

Instruction Faculty Fraction (IFF): Used to record WTUs associated with a) direct classroom instruction plus b) direct assigned time (excess enrollment, non-traditional instruction, in-service training for K-12 personnel, credit by examination, and instructional support for grad students). For example, a faculty member with a full-time teaching appointment would have an IFF of 1.0.

- a) **Direct classroom instruction** is measured by instructional WTUs. It is defined as unit value of each course taught, multiplied by an appropriate K-factor or S-factor of the course mode of instruction (lecture, lab, activity, supervision. etc.).

Notes:

- **Cross-listed Classes:** WTUs are adjusted for cross-listed classes. For all classes that are offered at the same time and location and by the same instructor, the WTUs are discounted to reflect the instruction of a single class. These are then apportioned across each of the cross-listed sections according to enrollment.
- **Application to Tenured/tenure Track Faculty** At this point it may be tempting to simply divide the section WTUs by the typical 12 Wtu load of a tenured/tenure track faculty member to determine the FTEF required for the section. This would only work if each faculty member had a 1.0 time-base and taught exactly 12 WTUs. It also presumes that no class sections are cross-listed. To attribute the correct FTEF to each section, each instructor's entire Wtu load must be summed across all sections within the department that they are teaching. Then, for each section, the FTEF is calculated as the section WTUs, divided by the instructor total WTUs, times the time base of the instructor. Thus a 1.0 appointment will have 1.0 FTEF attributed to all their sections and a .75 instructor will have .75 attributed. Section WTUs are apportioned to each instructor for team taught sections as well.
- **Application to Temporary Faculty:** Except in very rare occasions, all temporary faculty positions are engaged only in classroom activity. Typically, all temporary faculty WTUs are reported as "direct instruction" under IFF. Their WTUs are utilized, for the calculation of FTEF, at face value. The number of FTEF for a temporary faculty position is equal to the sum of WTUs for that position divided by 15.

- b) **Assigned time** is a faculty assignment that a faculty member can receive workload credit (WTUs) that are normally awarded to tenured/tenure track faculty. Temporary faculty could receive assigned time WTUs for special circumstances only. Activities for which WTUs may be assigned are listed by code number. For more information regarding assigned time code, visit www.iea.sjsu.edu/Others/APDB/AT/docs/Assigned_Time_Codes.pdf

Notes: Changes in assigned time components:

	Direct	Indirect
Instructional	1	3
Non-Instructional	2	4

- Prior to the fall 2013: All assigned time components (1 + 2 + 3 + 4) had been included in the calculation.
- During the fall 2013 and spring 2014: "Instructional" assigned time (1 + 3) were used.
- The fall 2014 and after: "Direct" assigned time (1 + 2) are included.

For more detailed information, please contact Office of Institutional Effectiveness & Analytics (408-924-1516)

Non-Instructional FTEF

Non-instructional WTUs are generated by a faculty being given administrative assignments, non-instructional/indirect assigned times, and reimbursed time and appointments from non-state funded. Non-instructional FTEF is excluded from SFR (student per faculty ratio) calculation.

1. **Instructional Administrative Fraction (IAF):** Used to record WTUs associated with faculty assignments related to administrative works, including Department Chairs, Associate or Assistant Department Chairs, Athletic Directors, Coordinator of teacher education, Deans, Associate and Assistant Deans.
2. **Other Support Fraction (OSF):** Used to record remaining WTUs (other than IFF or IAF), generated by an MPP position or a Librarian who teach a course, reimbursed time (grants and contracts), or indirect reassigned time such as new preparations, curricular planning, accreditation responsibilities, and CFA activities. It is supported by state budget funding as well as reimbursed time and appointments from non-state funded.

Examples

Case #1: A tenured/tenure track faculty teaching four 3-unit courses and awarded 3 units for service credit.

1. Four 3-unit courses (with a K Factor of 1) generate 12 WTUs. (4 x 3)
2. A workload of 12 units generates an FTEF of 1. (12 / 12)

Case #2: A temporary faculty position teaches four 3-unit courses.

1. Four 3-unit courses (with a K Factor of 1) generate 12 WTUs. (4 x 3)
2. A workload of 12 units generates an FTEF of 0.8. (12 / 15)

Case #3: One tenured/tenure track faculty position teaching three 3-unit courses, reassigned three units for a college special project, and awarded 3 units for service credit.

In order to teach the missing section, one temporary faculty is employed for one course.

1. For the tenured/tenure track faculty member:
 - a. Three 3-unit courses (with a K Factor of 1) generate 9 WTUs. (3 x 3)
 - b. Three units of direct assigned time add another three units of WTUs.
 - c. Collectively, a total workload of 12 units is utilized for the calculation of FTEF. (9 + 3)
 - d. A workload of 12 units generates an FTEF of 1. (12 / 12)
2. For the temporary faculty member:
 - a. One 3-unit course (with a K Factor of 1) generates 3 WTUs. (1 x 3)
 - b. A workload of 3 units generates an FTEF of 0.2. (3 / 15)
3. The total FTEF in this scenario is thus 1.2. (1.0 + 0.2)

Case #4: One tenured/tenure track faculty position teaching three 3-unit courses, three units of reimbursed time through a federal grant, and awarded 3 units for service credit. (For a full load of 15 units.)

In order to teach the missing section, one temporary faculty is employed for one course.

1. For the tenured/tenure track faculty member:
 - a. Three 3-unit courses (with a K Factor of 1) generate 9 WTUs. (3 x 3)
 - b. Three units of reimbursed time are reported in the APDB, but do not count as "instructional" workload for reporting purposes.
 - c. Collectively, a total workload of 9 units is utilized for the calculation of FTEF. (9 + 0)
 - d. A workload of 9 units generates an FTEF of 0.75. (9 / 12)
2. For the temporary faculty member:
 - a. One 3-unit course (with a K Factor of 1) generates 3 WTUs. (1 x 3)
 - b. For a temporary faculty, 3 WTUs are multiplied by 1.00 to generate a total workload of 3 units. (3 x 1)
 - c. A workload of 3 units generates an FTEF of 0.2. (3 / 15)
3. The total FTEF in this scenario is thus 0.95. (0.75 + 0.2)