Instructional program review data is accessed and manipulated through a series of data cubes and views. The Program Review Enrollment and Productivity cube provides data on section counts, enrollment, fill rates, FTES and other productivity measures. The Program Review Access and Success cube provides data on course success and retention rates as well as demographics. The Program Review Degrees and Certificates cube provides data on degrees and certificates of achievement conferred. This guide provides an overview of the data cubes, data definitions and instructions for generating standard views/reports for each cube.
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History

Static reports (Inception – 2010)
Program review has always employed a standard data set. These reports were static reports, provided initially by hard-copy and later in hard-copy and electronic format. In 2001, program review underwent a major re-design with many of the data elements and data tables streamlined for better use. Based on periodic evaluations of the program review process, data elements were refined or added, and reporting formats were improved. In 2006, analysis guides corresponding to the major data areas were developed by the faculty program review coordinator and Institutional Research to assist faculty in the analysis of program review data. Throughout these years, faculty requested Institutional Research to provide them with disaggregated data both in hard-copy and electronic format to analyze the data at a more granular level.

Pivot tables (2011)
Based on feedback from faculty, static reports were replaced with more interactive data sets in the form of pivot tables. Static reports were developed from Excel pivot tables, but program faculty could manipulate and create differing views of their data to aid in analysis.

Data Cubes (2012 - present)
Coast Community College District developed the infrastructure and made available the software to provide a more stable, interactive, self-service data source for program review. Using ARGOS, data cubes for program review were developed for use across the district. Data elements and the structure of the data cubes were decided upon collaboratively by campus and district research offices. Part of this structure includes standard definitions and calculations of data across all three colleges to allow for consistency in the analysis of the data at each college and across the district. Data for the cubes begins in 2008/2009, the first full year with the Banner system.
Overview of Data Cubes

Data principles
Data cubes allow the user a significant amount of flexibility in viewing, analyzing and reporting the data. It is important that users understand the dimensions and measures when manipulating cube data. The cube will allow a large number of combinations and manipulations, but these may distort or misrepresent the data. Users are responsible for the proper use of data cubes and should only do so for evaluation purposes.

Historical and certain current semester data fields are available in the cubes. In general, current semester data is not final until a month to two months after the semester ends. Any data viewed and analyzed for the current semester should be evaluated carefully and not represented as final data.

Development and Data Sources
Data cubes are developed using ARGOS software. OLAP (On-Line Analytic Processing) Cubes are a powerful tool, which allow users to perform analysis that is comprehensive and interactive. Data is structured hierarchically but users can rotate data elements in and out of the cube. This creates a customized view of specific data relationships and provides users incredibly detailed analysis of information with ease.

The program review cubes directly pull data from the Banner system, allowing for quicker reporting of data. Previously compiled program review reports used a combination of Banner extracts and MIS data files reported to the State Community College Chancellor’s Office (CCCCO). Due to this, data may vary slightly from prior program review reports and what is reported on the CCCCO’s Online Data Mart.

Changes in data compilation/measurement
Many additional elements are available for filtering and analysis in the program review cubes. Definitions are included in the glossary. The major changes in data compilation and measurement for existing program review elements are detailed below.

Section counts: Section counts are displayed with a decimal place. Sections that are not determined to be cross-listed are listed as #.0. Sections that are cross-listed are adjusted by the number of sections in the cross-listed group and the correct number is displayed. Two sections cross-listed are listed as 0.5 for each section. Three cross-listed sections are listed as .33 for each section. A special view to help programs see their cross-listed sections is shown below. Courses that overlap or are stacked, but not technically cross-listed in Banner will not be adjusted.

Fill Rates: Fill rates are adjusted by the cross-listed proportion. Courses that overlap or are stacked, but not technically cross-listed in Banner will not be adjusted.

Modality and Large Lecture: These elements were combined, but are now listed as separate elements. The report views developed allow for a similar analysis.

Demographics: Age, gender and ethnicity distributions provided previously reflected headcount. The distributions provided in the cube are duplicated. This allows for manipulation and detailed analysis within the cube at the course and program levels. For most programs, the program view will not be greatly skewed by the duplicated view.
Accessing the cubes via MyOCC

The data cubes are accessed through MyOCC. All employees have access to the cubes both on and off campus. Special permissions are not needed. The only stipulation is that the only browser supported is Internet Explorer. The instructions are listed below. If you are using a MAC, contact OCC IT so that they can set up your MAC to dual boot, allowing you to access Internet Explorer.

1. Log into MyOCC, click on the EMPLOYEE tab
2. Once on the EMPLOYEE tab, scan down to DISTRICT TOOLS. Click on COAST REPORTS.
3. Coast Reports will display the three program review cubes for you to access:
   a. Program Review – Access & Success
   b. Program Review – Degrees & Certificates Awarded
   c. Program Review – Enrollment
4. Click on RUN REPORT for any cube you want to access.
   a. A Security Warning box may pop up asking you to allow this as a trusted site. Click YES.
   b. As the cube opens, a Choose the Saved State box may pop up asking you to load a saved state. Highlight the date displayed and click on OK. Saved states are run each morning allowing current information to be accessed.
   c. The cube should load and appear. It is now ready for you to explore.

If you need assistance, please contact the Program Review Coordinator or Institutional Research for assistance. Contact information is at the end of this guide. NOTE: When these cubes were first deployed, Active X add-in needed to be installed by IT support. This is no longer necessary.

Basic navigation of cubes

The cubes are designed as DISTRICT-WIDE reports and you must begin every session filtering out the other colleges. Acquaint yourself with the basic set up of the cubes before further exploring. Below is the typical format for all cubes and shows the different areas and functions.
A. **Filter Options/Dimensions**: Parameters offered to the user to further exclude unwanted data. This feature provides the capability to include only user chosen data elements (or parts of data elements) for the needed information. This is what gives the cubes ‘drill down’ capabilities. For program review, you will always start your filter by selecting OCC as the college.

B. **Column Dimensions**: Data elements by which information in the cube is grouped. Column dimensions will be the column headings in the cube.

C. **Row Dimensions**: Data elements by which information in the cube is divided. Row dimensions will be the row divisions in the cube.

D. **Measures**: Calculations made with the selected data elements (selected by filters – row, column). It is the information in the heart of the table. Measures can be in the form of counts, averages, percentages, etc. The cube can hold multiple measures and the user can customize the format.

**Filtering Basics**

All pull-down arrows show the options for filtering. A series of options for filtering are listed at the base of the pull-down arrow. These are described below.

**SET UP BOXES (1 – 8)**

- **GREEN small √** check mark (first box on the left) allows you to select all options at one time; this is the default set for all dimension/filter.
- **BLUE small X** (second box from the left) allows you to remove titles from the display, but it leaves the values in the table. We recommend NOT USING this option as it may display data without titles and be confusing later on.
- **RED small X** (third box from the left) is to unselect all options at one time.
- Blue arrows (fourth box from the left) allows you to scroll through the first three options in order.
- The three file folders (fifth, sixth and seventh boxes) allow new groupings/hierarchies to be developed and expanded/contracted; these are currently not functional and are not planned to be.
- The last button (looks like multiple pages) allows you to sort dimension options ascending or descending.

**CONFIRMING BOXES (9-11)**

- **BIG GREEN √** allows you to confirm you filtering choices. After selecting this, the changes will appear in the cube.
- **RED BIG X** allows you to cancel any filtering options in progress or return to the cube without making any changes.
- The blue question mark is a link to online help through ARGOS. This does not appear to work.

For example, to select OCC as the college:

- Unselect ALL options using the **RED small X**
- Select OCC
- Click on the **BIG GREEN √**
- The changes automatically occur.

This method works for ALL filters, such as selecting your department or a specific course.
Creating Cubes for Analysis and Reports

Enrollment and Productivity Cube
The enrollment and productivity cube has two established views:

- Enrollment (section count, enrollment, fill rates and max seats)
- Productivity (FTES, WSCH/FTEF and FTES/FTEF)

The default view is the enrollment view. To go to the productivity view, click on the hyperlink titled "Productivity Cube" next to the cube’s title. After accessing this view, you can toggle back to the enrollment view by clicking on the "Enrollment Cube" title in the same location.
**Enrollment Reports**

**Standard Reports**
- Program Overall Enrollment
- Program Enrollment by Modality and Large Lecture
- Program Enrollment by Schedule
- Course Enrollment
- Course Enrollment by Modality and Large Lecture
- Course Enrollment by Schedule

**Dimension/Filter Set Up for all Enrollment Reports**
- COLLEGE = Select only OCC
- AAM = Unselect INDEPENDENT STUDY – FTES EXEMPT and OTHER - FTES EXEMPT
- TERM CALENDAR = Unselect summer 2012, fall 2012 and spring 2012

**Measure Set Up**
Default cube view includes sections (adj), enrollment, max seats and fill rate; no customization needed

**Creating Program Reports**
DIMENSIONS = Use SUBJECT to select your department; if you are analyzing multiple departments you can select multiple departments. For more specific programs select by specific courses based on PR Curriculum sheet using COURSE ID.

**Report: Program Overall Enrollment**
After selecting your department using SUBJECT dimension, the default view will be this report. To easily see what is filtered, expand the dimensions and columns.

**Report: Program Overall Enrollment by Modality & Large Lecture**
Use the base set up for Program Overall Enrollment. After selecting your department using SUBJECT dimension, drag COURSE ID below LARGE LECTURE FACTOR and expand the “+” sign under TERM CALENDAR YEAR to expose modality and large lecture fields.
**Reports: Program Overall Enrollment by Schedule; Course Enrollment by Schedule**

Use the base set up for *Program Overall Enrollment*. After selecting your department using SUBJECT dimension, drag SESSION TYPE from the available dimensions area, locate above TERM CALENDAR, and expand the “+” sign under TERM CALENDAR YEAR to expose modality and large lecture fields (RED markings). To view by course, drag COURSEID above TERM CALENDAR YEAR and expand the “+” sign under COURSEID (GREEN markings).
Reports: Course Enrollment; Course Enrollment by Modality & Large Lecture

Use the base set up for Program Overall Enrollment. After selecting your department using SUBJECT dimension, drag COURSE ID above TERM CALENDAR, and expand the “+” sign under TERM CALENDAR YEAR to expose modality and large lecture fields.

**Productivity Reports**

**Standard Reports**

Program Overall Productivity by Modality and Lecture  
Course Productivity by Modality and Lecture

**Dimension/Filter Set Up for all Productivity Reports**

COLLEGE = Select only OCC  
AAM = Unselect INDEPENDENT STUDY – FTES EXEMPT and OTHER - FTES EXEMPT  
TERM CALENDAR = Unselect summer 2012, fall 2012 and spring 2012

**Measure Set Up**

Default cube view includes two measures to unselect (enrollment and fill rate). The resulting measures are Sections (adj), FTES Total, WSCH/FTEF (595) and FTES/FTEF (30). The program review reports omit enrollment and fill rate to allow for easier analysis of productivity measures.

**Creating Program Reports**

DIMENSIONS = Use SUBJECT to select your department; if you are analyzing multiple departments you can select multiple departments. For more specific programs select by specific courses based on PR Curriculum sheet using COURSE ID.
Reports: Program Overall Productivity and Course Productivity

After selecting your department using SUBJECT dimension, click on the Σ icon (see RED arrow) in the measures area to access available measures to unselect enrollment and fill rate. This modified view will be this report. Expand the “+” sign under TERM CALENDAR YEAR to expose modality and large lecture fields. To view by course, drag COURSEID above TERM CALENDAR YEAR and expand the “+” sign under COURSEID.

Special Views

Cross-Listed Courses

For any view of the data, a program can add the XLST GROUP ID dimension to the column to view their cross-listed courses. In most cases, it is preferable to place this in the column under TERM CALENDAR.
Typical custom views
For any view of the data, a program can look at their data clustered in different ways. Below are some options that are commonly used.

- Academic Year rather than by term - drag Academic Year filter dimension to the top of the ROW dimension.
- Fall and spring terms only – click on SEMESTER dimension and unselect summer terms, click the BIG GREEN checkmark.
- Enrollment trends by CRN – drag the CRN filter dimension below the SEMESTER row dimension then expand with the “+” sign. This is only available in the Program Review-Enrollment cube.
- Removing a default row dimension – drag the row dimension to the Filter Dimension area. Example: Removing LARGE LECTURE dimension for the Program Review – Enrollment cube, drag to the top and data will not be displayed with this category.

Access and Success Cube
Similar to the enrollment and productivity cube, the access and success cube has two established views:

- Success and Retention
- Demographics

Navigation between the views is the same for all cubes.

The access and success cube includes information on success and retention rates as well as student demographics (e.g., age, gender and ethnicity). Data can be disaggregated to the course level. Disaggregation is not allowed beyond the course level in this cube due to ensure privacy of enrolled students. The ARGOS software does not suppress reporting values under 5. As data is disaggregated with dimensions displaying personal characteristics, small cell sizes could lead to personally identifying students. As a result, CRN (section) level disaggregation is not programmed into this cube.

Success and Retention Reports

Standard Reports
Program Overall Success and Retention Rates
Program Success and Retention Rates by Modality and Large Lecture
Program Success and Retention Rates by Schedule
Course Success and Retention Rates
Course Success and Retention Rates by Modality and Large Lecture
Course Success and Retention Rates by Schedule

Dimension/Filter Set Up for all Success and Retention Reports
COLLEGE = Select only OCC
AAM = Unselect INDEPENDENT STUDY – FTES EXEMPT and OTHER - FTES EXEMPT
TERM CALENDAR = Unselect summer 2012, fall 2012 and spring 2012

Measure Set Up
Default cube view includes enrolled, success rate and retention rate; no customization needed

Creating Program Reports
DIMENSIONS = Use SUBJECT to select your department; if you are analyzing multiple departments you can select multiple departments. For more specific programs select by specific courses based on PR Curriculum sheet using COURSE ID.
Reports: Program Overall Success and Retention Rates; Program Success and Retention Rates by Modality & Large Lecture
After selecting your department using SUBJECT dimension, the default view will be this report. Expand the “+” sign under TERM CALDENDAR YEAR to expose modality and large lecture fields.

Reports: Course Success and Retention Rates; Course Success and Retention Rates by Modality & Large Lecture
Use the base set up for Program Overall Success and Retention Rates. After selecting your department using SUBJECT dimension, drag COURSE ID below LARGE LECTURE FACTOR and expand the “+” sign under TERM CALDENDAR YEAR to expose modality and large lecture fields.

Reports: Program Success and Retention Rates by Schedule; Course Success and Retention Rates by Schedule
Use the base set up for Program Overall Success and Retention Rates. After selecting your department using SUBJECT dimension, drag COURSE ID below LARGE LECTURE FACTOR and expand the “+” sign under TERM CALDENDAR YEAR to expose modality and large lecture fields.

Demographic Reports

Standard Reports
Program Overall Age Distribution
Program Overall Gender Distribution
Program Overall Ethnicity Distribution

Dimension/Filter Set Up for all Success and Retention Reports
COLLEGE = Select only OCC
AAM = Unselect INDEPENDENT STUDY – FTES EXEMPT and OTHER - FTES EXEMPT
TERM CALENDAR = Unselect summer 2012, fall 2012 and spring 2012

Measure Set Up
Default cube view AGE Gender and ethnicity can be accessed by dragging “GENDER” or “RACE GENERAL” to the COLUMN area of the cube. Remove AGE dimension.

Default view DOES NOT include percentages. To add percentages, click on MEASURES, select the data element of interest (e.g., age, gender or race-general), click on ENROLLED and select “% by r group”. Click on green √ (check mark). Percentages and raw numbers should appear in the cube.
Degrees and Certificates Cube

Degree and certificate data for the 2012-2013 program review year was provided in static reports based on MIS data submissions. Slight differences between degrees and certificates of achievements awarded will be seen between data in the cube compared to CCCCCO reports. This is due to awards posted after the submission deadline to the State. Additionally, the data cube does not provide figures on locally approved certificates, such as certificates of specialization, as these are not recorded in the Banner system at this time. These counts are available through the Office of Institutional Research.

Instructions on manipulating the degree and certificate cube will be posted in this report by October 31, 2012. If you need help with this cube before this time, please contact the Program Review Coordinator of Institutional Research. The contact information is at the end of this guide.
Definitions

**DIMENSIONS**

Division: The academic division to which the program or course is assigned.

Department: The administrative departments name the program and courses are organized by.

Subject: Akin to the discipline the program relates to. At OCC, the department and discipline structure is aligned with only a few exceptions. Comparisons across the district should use subject.

CourseID: The course name and number.

CRN: Course record number and the number assigned to a specific course section.

AAM: Attendance accounting method is assigned based on how the course is scheduled. It determines how the section’s FTES is calculated.

Instructional Method: Describes the instructional delivery. Modality is a subset of instructional method.

Course Credit Status: The type of course: credit degree applicable; credit not degree applicable; non-credit.

Part of Term: Code describing specific scheduling semester subsets, such as intersession.

Top Code: Six-digit code assigned to the discipline at the state level.

TOP: The six-digit top code description.

Session Type: Description of when the course is scheduled. Includes day, evening and weekend as categories.

Building: The code of the building in which the CRN is scheduled.

Room: The room and number in which the CRN is scheduled.

Begin Time: The start time of the CRN.

Weeks: The number of weeks the course is scheduled for. It allows for analysis by course length.

XLSTGROUP ID: A common number assigned to cross-listed sections. It allows for easy identification of related sections.

**MEASURES**

Sections (adj): Adjusted section count based on cross-listed sections. Sections without a XLSTGROUP ID are only adjusted.

Enrollment (Census): The official enrollment count based on attendance at the 20% point in the course.

Max Seats: The maximum number of enrollments a section is scheduled for.

Fill rate (adj): Census enrollment divided by max seats. It is adjusted for cross-listed sections.

FTES Total: Total full-time equivalent students based on enrollment of resident and non-resident students. Calculations based on census enrollment or number of hours attended based on the type of AAM assigned to a section.
WSCH/FTEF (595): A measure of productivity that measures the weekly student contact hours compared to full-time equivalent faculty. When calculated for a 16 week schedule, the productivity benchmark is 595. When calculated for a 18 week schedule, the benchmark is 525.

FTES/FTEF: A measure of productivity that measures the FTES generated compared to full-time equivalent faculty. It provides an equated measure of average students per full-time faculty member.

Success Rate: The number of passing grades (A, B, C, P) compared to all valid grades awarded (see program review guide for definition).

Retention Rate: The number of retention grades (A, B, C, P, D, F, NP, I*) compared to all valid grades awarded (see program review guide for definition).
Contacts & Help

The Office of Institutional Effectiveness is available to assist program faculty and deans with accessing and manipulation the cube, developing reports and different views from the cube, explaining cube dimensions and measures, and any other data/report issues. The office is located in C&L 114.

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