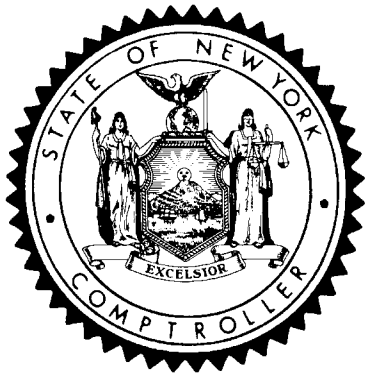


***State of New York***  
***Office of the State Comptroller***  
***Division of Management Audit***  
***and State Financial Services***

**CITY UNIVERSITY OF NEW YORK**

**MEASURING FACULTY TEACHING  
WORKLOAD: DATA RELIABILITY**

**REPORT 99-S-6**



***H. Carl McCall***  
*Comptroller*



# State of New York Office of the State Comptroller

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## **Division of Management Audit and State Financial Services**

### **Report 99-S-6**

Dr. Matthew Goldstein  
Chancellor  
City University of New York  
535 East 80 Street  
New York, NY 10021

Dear Dr. Goldstein:

The following is our audit report on measuring faculty teaching workload data reliability for the 11 City University of New York senior colleges.

We did this audit according to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law. Major contributors to this report are listed in Appendix A.

*Office of the State Comptroller  
Division of Management Audit  
and State Financial Services*

October 25, 2000

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# Executive Summary

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## City University of New York Measuring Faculty Teaching Workload: Data Reliability

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### Scope of Audit

The City University of New York (CUNY) has 11 senior colleges, 6 community colleges, a graduate school, and a law school. For the 1998-99 fiscal year, more than 200,000 students were enrolled for CUNY degrees with another 150,000 students enrolled in adult and continuing education courses. CUNY has approximately 6,000 full-time faculty and an operating budget of about \$1.3 billion. CUNY is governed by a Board of Trustees and has a Central Administration (CUNY Central) to monitor academic development and activities for the colleges. While CUNY's colleges have considerable autonomy, a Board goal is to develop policies and procedures which also maintain an integrated university system.

CUNY measures teaching workload according to credit hours taught by faculty. This information, as well as other personnel and faculty workload data, is recorded in CUNY Central's computerized City University Personnel System (CUPS). Each campus is required to electronically submit data on faculty workload at the end of each semester and annually. CUPS affords CUNY the opportunity to measure its faculty teaching workload on a campus basis or on a system-wide basis and to compare results with other universities and colleges. According to CUNY's contract with its faculty, the teaching workload of faculty should not exceed 21, 22, or 27 student credit hours per academic year, depending on whether the faculty member is a professor, instructor or lecturer. The contract also specifies that a three-year averaging period can be used to determine whether faculty have achieved the required teaching workload.

Our audit addressed the following question about CUNY's ability to measure its teaching workload for the period July 1, 1997 through June 30, 1998:

- ! What steps does CUNY need to take to improve the reliability of CUPS data for the purpose of measuring and comparing its faculty teaching workload?

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### Audit Observations and Conclusions

Certain limitations with CUPS data create the risk that teaching workload data for the senior colleges is not sufficiently reliable. CUNY Central needs to take steps to ensure that the faculty teaching workload data is accurate, complete and consistent. Without reliable data, CUNY Central is unable to accurately measure faculty workload on a campus or system-wide basis or compare its results with other universities and colleges.

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One of the significant limitations is that, according to CUNY Central, some colleges may be updating CUPS teaching workload data to reflect the maximum credit hours permitted under the faculty contract rather than the actual workload performed by the faculty. In fact, officials at two campuses confirmed to us that they update CUPS in this manner and that they maintain their own independent data to reflect actual teaching workload. However, the appropriate means to establish compliance with the contract and required teaching workload, as well as to accurately measure and compare teaching workload for the system, is to have each college record the actual data into CUPS for each semester and academic year. We recommend that colleges be required to report actual teaching workload into CUPS. (See pp. 5-6)

We found through our analysis of the CUPS database that neither CUNY Central nor the colleges were adequately identifying and following up on instances when CUPS showed no teaching workload for faculty members. We identified 156 instances for the 1997-98 academic year where faculty members had no teaching workload on CUPS. Our follow-up with CUNY Central and with the colleges showed that in 35 instances the colleges had been incorrectly omitting teaching workload from CUPS; in 18 instances the faculty were on approved leave, but CUPS did not reflect this status; in 79 cases the faculty duties had reportedly been shifted to other than teaching duties; and in 24 instances the faculty were no longer working for the colleges, but their names had not been removed from CUPS. We recommend the implementation of quality assurance and review procedures which provide reasonable assurance of the detection and correction of incomplete or inaccurate teaching workload data. (See pp. 6-7)

We also found that CUPS teaching workload credited to faculty by the colleges for non-structured courses (defined by CUNY as lectures, independent study, class sizes of less than six students and classes with only one student) could vary among colleges and between departments at the same college. CUNY required that college formulas and guidelines used in such situations be provided to CUNY Central so that data could be correctly interpreted. However, we found a lack of documentation supporting that all the colleges submitted this information in a complete and accurate manner during our audit period. These conditions contribute to the risk that CUNY teaching workload data is not sufficiently reliable for measurement and comparison purposes. CUNY Central should ensure that the colleges submit the required formulas and guidelines. (See pp. 7-8)

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## **Comments of CUNY Officials**

CUNY officials agree with our audit report recommendations and indicate that measures have been adopted to implement them.

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Major Contributors to This Report

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Comments of the City University of New York Officials

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# Introduction

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## Background

The City University of New York (CUNY) consists of 11 senior colleges, 6 community colleges, a graduate school, and a law school. More than 200,000 students are enrolled for degrees, and another 150,000 students are enrolled in adult and continuing education courses. Based on student population, CUNY is the largest municipal college system and the third largest university system in the nation. For the 1998-99 fiscal year, CUNY had about 6,000 full-time faculty and an operating budget of \$1.3 billion.

CUNY is governed by a 17-member Board of Trustees (Board). CUNY's Central Administration (CUNY Central) is responsible for monitoring the academic development and activities of the colleges to ensure that the Board's goals are achieved. The Chancellor is CUNY's chief educational and administrative officer. CUNY's individual colleges have considerable latitude and autonomy and govern their affairs through various bodies representing faculty, students, and administrators. However, the Board has a goal of developing policies and procedures to maintain an integrated university system. Instructional staff of CUNY are represented by the Professional Staff Congress City University of New York (PSC) union, which negotiates the collective bargaining agreement with the Board. This agreement covers salaries and terms and conditions of employment, including teaching workload.

The City University Personnel System (CUPS) is an on-line management information system that operates on CUNY's mainframe computer. CUPS was initially implemented in 1985, and since then it has been significantly upgraded with new and improved functions. In 1996, CUNY Central expanded CUPS to support the collection and reporting of faculty workload data, including data related to teaching workload. Each campus is required to electronically submit data on faculty workload at the end of each semester and annually. Using this system, CUNY Central collects data on students and faculty for budgeting purposes. CUNY Central also uses the data to provide various statistics on CUNY's colleges.

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## Audit Scope, Objective and Methodology

An initial objective of our performance audit was to measure the overall faculty teaching workload of CUNY's 11 senior colleges for the three years ended June 30, 1999. Another initial objective was to compare faculty teaching workload measurements among these colleges and with those of peer institutions. However, in the survey phase of our audit, we concluded that CUPS teaching workload data has several limitations which, taken collectively, create the risk that this data is not sufficiently reliable for these purposes. We therefore revised our audit to focus on the objective of determining what steps CUNY needed to take to improve the reliability of

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CUPS data for the purpose of measuring and comparing teaching workload. Our audit covered the 1997-98 school year, from July 1, 1997 to June 30, 1998. To accomplish our revised audit objective, we reviewed applicable policies, procedures, standards and practices pertaining to CUPS data processing. We also reviewed teaching workload provisions of CUNY's Bylaws and the faculty PSC union agreement. We analyzed relevant data and we interviewed faculty and appropriate managers at CUNY Central and each of the senior colleges.

We conducted our audit according to generally accepted government auditing standards. Such standards require that we plan and do our audit to adequately assess those procedures and operations included within our audit scope. Further, these standards require that we understand the colleges' and CUNY Central's internal control systems and their compliance with those laws, rules and regulations that are relevant to the operations included in our audit scope. An audit includes examining, on a test basis, evidence supporting transactions recorded in the accounting and operating records and applying such other auditing procedures as we consider necessary in the circumstances. An audit also includes assessing the estimates, judgments, and decisions made by management. We believe our audit provides a reasonable basis for our findings, conclusions and recommendations.

We use a risk-based approach when selecting activities to be audited. This approach focuses our audit efforts on those operations identified through our preliminary survey as having the greatest probability for needing improvement. Consequently, by design, we use finite audit resources to identify where and how improvements can be made. Thus, we devote little audit effort to reviewing operations that may be relatively efficient or effective. As a result, our audit reports are prepared on an "exception basis." This report, therefore, highlights those areas needing improvement and does not address activities that may be functioning properly.

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## **Response of CUNY Officials to Audit**

A draft copy of this report was provided to CUNY Central officials for their review and comment. Their comments were considered in preparing this report and are included as Appendix B.

Within 90 days after the final release of this report, as required by Section 170 of the Executive Law, the Chancellor of the City University of New York shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons therefor.

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# Reliability of CUPS Teaching Workload Data

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Faculty teaching responsibilities generally include preparing for classes and instructing and evaluating students. A number of measurements can be used to quantify teaching workload such as the ratio of the number of students to the number of faculty (student/faculty ratios), the total number of students that each faculty member has in his or her classes (student contact hours), the number of classroom hours that each faculty member teaches weekly (faculty contact hours) and the total number of credit hours awarded for each class taught by faculty (classroom credit hours). In addition to teaching workload, faculty workload also may generally include such things as research, administration and community outreach.

The appropriateness of measuring faculty teaching workload has generally been recognized in the academic community. For example, the American Association of University Professors (AAUP) has issued a statement on faculty teaching workload which states that workload is usually described in hours per week of formal class meeting (faculty contact hours). However, the AAUP also states that some institutions measure teaching workload in terms of student contact hours. Through its contract with the faculty PSC union, CUNY measures teaching workload in terms of student credit hours per academic year. The contract specifies that the teaching workload of CUNY faculty should not exceed 21, 22, or 27 student credit hours per academic year, depending on the college and whether the faculty member is a professor, instructor or lecturer. In this respect, CUNY has established the upper limits for its measurement of what constitutes effective faculty teaching workload.

When we contacted two other large public university systems, the State University of New York and the University of California State, we found that these systems record their faculty teaching workload within computerized databases. Both systems have multiple campuses and reportedly use their databases to, among other things, generate faculty teaching workload data for measurement purposes. Both systems also reportedly utilize extensive guidelines, procedures, and centralized quality assurance staff in support of the integrity of their faculty workload databases.

CUNY's 11 senior colleges operate autonomously in many respects and must, therefore, be able to independently measure and manage their respective faculty teaching workloads. However, it is also important for CUNY to be able to reliably measure faculty teaching workload in a meaningful way for the overall system. Such capability supports the concept of an integrated CUNY, allows CUNY to compare itself with other university systems, and permits CUNY to measure overall compliance with its union contract.



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CUNY's Board of Trustees is responsible for governing colleges within CUNY with a goal to develop similar policies and procedures in order to maintain CUNY as an integrated system. In addition, the June 1999 Mayor's Task Force report on CUNY, entitled "An Institution Adrift," recommends that CUNY become an integrated university system whose mandate is to provide strategic direction based upon a clear accountability for all programs and institutions. The Task Force report also recommends that CUNY create an integrated management information system that can provide better and more accessible management information.

During our audit, we identified several limitations pertaining to the accuracy, completeness and consistency of CUPS teaching workload data. Taken collectively, these limitations suggest a less than optimal control environment over CUPS teaching workload data and create the risk that this data is not sufficiently reliable for system-wide measurement purposes. The specific limitations and the controls and procedures needed to address them are discussed in greater detail in the following sections of this report.

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## **Data Accuracy**

In July 1998, CUNY signed a contract for the period February 1, 1996 through July 31, 2000 with the faculty represented by the faculty PSC union. As previously discussed, the contract specifies that the teaching workload for faculty is not to exceed certain maximum credit hours each year (21, 22, or 27). The contract also allows that in order to address specific scheduling conflicts, compliance with the required faculty teaching workload can be determined by averaging workload (instruction hours per year) over a three-year period. Thus, for example, faculty who do not teach the required credit hours in one term can adjust their schedules in subsequent terms to meet required instruction hours.

CUNY Central reported to us that some colleges may have been inputting into CUPS the maximum credit hours allowed for faculty teaching workload in accordance with the contract instead of the actual required teaching workload being performed. Officials at Lehman College and at Brooklyn College confirmed that their campuses are, in fact, updating CUPS to reflect maximum allowable credit hours for faculty teaching workload. They indicated that the campuses kept separate records to reflect actual required teaching workload that was taking place.

These conditions create significant risk about the reliability of CUPS teaching workload data. Apparently the colleges may be assuming that average teaching workload for the three-year averaging period is going to meet the maximum limits and, therefore, there is no need to have CUPS reflect the variation that might take place by reporting actual workload from year to year.

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In response to these findings, CUNY Central officials stated that they will, in consultation with the colleges, establish guidelines for the teaching workload averaging provisions of the contract with the faculty PSC union. They also stated that they have instructed the colleges to report actual hours worked.

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## **Data Completeness**

An effective measurement system for CUNY's teaching workload must have complete workload data for all faculty members. Through CUPS, the 11 senior colleges report faculty workload data to CUNY Central where the workload data is processed and compiled into reports used for a variety of management purposes. CUNY Central has developed guidelines to assist the colleges in the completion of this process.

Using computerized audit tools, we reviewed and analyzed the CUPS workload report for the 1997-98 school year for CUNY's 11 senior colleges. Of a reported 3,000 full-time faculty members, we found 156 instances where faculty members had no teaching workload in CUPS. (There were no such instances identified by our analysis for Lehman College or Hunter College.) We followed up with the various colleges and with CUNY Central to determine why no teaching workload records existed in CUPS for these faculty. From the colleges we ascertained that, for 35 faculty, the colleges had incorrectly omitted the teaching workload from input into CUPS. In 18 cases, the faculty were on approved leave, but this status had not been recorded on CUPS by the colleges. In 79 cases, the faculty had reportedly been assigned to duties not involving teaching. Finally, in 24 instances the faculty were no longer working for the college, and their names should have been removed from CUPS by the colleges. Our follow-up also showed that CUNY Central was not generally performing adequate oversight of the accuracy or the completeness of CUPS teaching workload data. Therefore, no efforts to identify, follow-up or correct (where necessary) these 156 instances had occurred.

In response to our observations, CUNY Central officials stated that they will continue to seek ways to enhance their system management and control capabilities. They also stated that the instances we identified would be reviewed with college officials to determine what, if any, corrective action is needed. In addition, CUNY Central officials pointed out that the instances we reported were relatively insignificant considering that CUNY teaching workload must account for more than 3,000 full-time faculty at the senior colleges each semester.

It should also be noted that our audit test is limited to one condition, the absence of any teaching activity for listed faculty, and it does not, for example, involve verification of reported teaching workload. Therefore,

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given the lack of adequate oversight by CUNY Central, there may be other undetected data integrity problems with CUPS teaching workload data.

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## **Data Consistency**

Given the autonomy and the diverse needs of each of the senior colleges, a certain amount of inconsistency can be expected in the compilation and reporting of teaching workload for CUPS. For example, in accordance with CUNY criteria, non-structured classes at the colleges may take the form of independent study, lecture classes, classes with less than six students and classes with only one student. The colleges have the authority to determine the appropriate portion of credit hours to be awarded to faculty members teaching courses meeting these criteria. For example, we were informed that six colleges award a professor a fraction of a credit hour for teaching an independent study course, but four colleges do not give a professor any credit for independent studies.

From our field visits at the senior colleges we also learned that inconsistencies in reported teaching workload can also occur depending on whether and how the colleges award teaching workload credit hours for faculty activities pertaining to work on committees and fund raising activities. Sometimes variations can occur even among departments at the same college.

To address data inconsistencies, CUNY Central requires the colleges to submit guidelines and formulas that they use to calculate reported teaching workload assigned for non-structured courses. Once CUNY Central receives this information, CUNY should be able to take it into account in measuring and comparing system-wide teaching workload in a meaningful manner. However, we found that CUNY was not able to document whether the colleges had submitted all the formulas and guidelines pertaining to their data for our audit period. These conditions are another indicator that CUPS data may not be sufficiently reliable for system-wide measurement and comparison purposes.

In response to our observations, CUNY Central officials stated that non-structured courses account for only a small percentage of faculty teaching workload and that criteria for structured classes are clearly defined. Regarding awarding teaching workload credit for non-teaching duties, CUNY officials stated that committee work should not be included in teaching workload and that deviations in practices regarding these activities would not affect teaching workload. They also stated that under exceptional circumstances, a college might provide a faculty member with released time for fund raising purposes. In order to accurately assess the impacts and validity of variations in the awarding and recording of credit hours, CUNY Central needs to obtain and fully analyze all the various formulas and guidelines used by the colleges.

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## **Recommendations**

1. Instruct colleges to record in CUPS their actual teaching workloads instead of the maximum workloads stated in the contract.
2. Follow-up and resolve the instances cited in this report where CUPS listed faculty without any teaching workload.
3. Implement CUPS oversight and review procedures which provide reasonable assurance of the detection and correction of incomplete or inaccurate teaching workload data as well as data that is not in conformance with college guidelines and formulas and the criteria of CUNY.
4. Document the Colleges' required submission to CUNY Central of all the formulas and guidelines underlying the reporting of faculty teaching workload for CUPS.

(CUNY officials generally agree with recommendations Number 1 through Number 4. They indicate that measures have been adopted to implement them.)

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## **Major Contributors to This Report**

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Jerry Barber  
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*The City University of New York*



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September 25, 2000

Mr. Jerry Barber  
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A.E. Smith State Office Building  
Albany, NY 12236

Dear Mr. Barber:

I write in response to your request for comments regarding the results of your audit of faculty utilization at The City University of New York (99-S-6). The attached response was provided by the University Office of Faculty and Staff Relations (OFSR) and indicated the steps taken to implement the draft report's recommendations.

We agree with the recommendations contained in the draft report and appreciate your efforts subsequent to the audit work to address many of our concerns regarding the content of the two prior preliminary reports. We are pleased that the preliminary findings regarding areas such as adjunct teaching loads and faculty workload averaging, and the lack of standardized guidelines on reporting faculty workload hours were either revised or modified and the corresponding recommendations eliminated from the draft report. Accordingly, the focus of the draft report became the results of the State auditors' review of the CUPS faculty workload data (which included both teaching and non-teaching activities) for senior colleges covering academic year 1997-98.

The University measures faculty teaching activity through the teaching load report and monitors compliance with provisions of the collective bargaining agreement through the workload report. The University has taken steps to ensure that the colleges' faculty teaching load data is accurate, complete and consistent with University policy permitting the colleges the necessary flexibility to respond to their unique circumstances, histories and missions. In addition, as indicated in the attached response, the University has also addressed the data entry problems cited in the draft report regarding the faculty workload report.

On a broader scale, the University is committed to upgrade and unify its administrative information systems. A strategic plan is currently being developed to phase-in system modifications and changes, as well as data processing and interchange improvements. The ultimate objective is to fully implement an integrated University-wide management information system. This will result in more comprehensive and timely management reporting options. This initiative will also

address the concerns regarding an integrated university system noted in the June 1999 Mayor's Task Force report on CUNY.

I appreciate the opportunity to submit the attached response and comments indicated above for inclusion in your final report. If you have any questions, please call me at (212) 997-5820.

Sincerely,



Louis Chiacchere

c: Senior Vice Chancellor David Freed  
Vice Chancellor Sherry Brabham  
Vice Chancellor Brenda Malone  
Raymond O'Brien  
Rosemary Segreti

IA#982

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*The City University of New York*



*Office of the Vice Chancellor for Faculty and Staff Relations*

*535 East 80 Street, New York, N. Y. 10021*

*212/794-3333*

September 19, 2000

Mr. Jerry Barber  
Audit Director  
Office of the State Comptroller  
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Albany, New York 12236

Dear Mr. Barber:

I write in response to the draft audit report (99-S-6) on measuring faculty teaching workload data reliability for the 11 senior colleges of The City University of New York. The audit report makes four recommendations to improve the accuracy of the data in the Workload Report, which is generated from the City University Personnel System (CUPS). While the University appreciates the recommendations and has already implemented them, it is important to understand the Workload Report's narrow purpose and use within the University.

The Workload Report is not used for budgetary or reporting purposes, as suggested in the Executive Summary. Rather, the University uses a different report for those purposes, the Teaching Load Report. A copy of the Teaching Load Report was given to the auditors at the inception of the audit.

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Note

The Workload Report is used primarily by the Office of Faculty and Staff Relations (OFSR) to monitor the colleges' use of available faculty workload, which is composed primarily of teaching, but also includes reassigned time for research or administrative work. For example, if a professor in a senior college teaches 18 classroom contact hours during an academic year out the permissible 21 classroom contact hours, OFSR would use the Workload Report to monitor how the college utilized the remaining three available classroom contact hours.

To be responsive to the Office of the State Comptroller's audit, OFSR has already adopted measures to effect the four recommendations in the draft report:

- *Recommendation #1:* The Office of Faculty and Staff Relations (OFSR) implemented this recommendation well before the draft was released. In memoranda dated June 3, 1999 (for the 1998-1999 workload data collection)

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\*See State Comptroller's Note, B-4



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Mr. Jerry Barber  
September 19, 2000  
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and May 12, 2000 (for the 1999-2000 workload data collection), the colleges were instructed that they were to report the actual workload for faculty members, even if this did not match the contractual workload, and explain any deviation in writing. This directive will be repeated in subsequent workload data collection memoranda. Thus, the colleges should now be reporting accurate teaching data on the Workload Report.

- *Recommendation #2:* OFSR implemented this recommendation as soon as it received the names from the auditors earlier this year. It has sent a memorandum to the colleges, asking them to investigate each instance and report their findings. OFSR is actively following up with the colleges.
- *Recommendation #3:* OFSR has implemented this recommendation and is currently auditing the 1999-2000 workload data. The first step in this process was to notify the colleges on August 11, 2000 of inconsistent and/or omitted entries. OFSR is following up with the colleges.
- *Recommendation #4:* OFSR has completed implementation of this recommendation; it has requested and received from all of the colleges their workload formulas and guidelines.

OFSR appreciates the work that the auditors performed and has implemented their recommendations, which will improve the Workload Report's usefulness to OFSR in monitoring the colleges' utilization of faculty workload.

Sincerely,

  
Brenda Richardson Malone  
Vice Chancellor

State Comptroller's Note

Certain Matters addressed in the draft report were revised or deleted from the final report. Therefore, some CUNY comments included as Appendix B may relate to matters no longer contained in this report.