Spring 2014 Quarterly Report
Includes Review of 13-14 Annual Data
Computer Lab Management
Prepared by Tim Leamy

Computer Lab Management (CLM) operates 20 computer rooms across the UC Davis campus. These consist of 14 computer classrooms and 6 open access labs with a total of 615 installed stations. CLM also manages four departmental computer rooms with 111 installed stations for the School of Education and the Language Learning Center.

CLM recently increased the number of computer classrooms and saw a large increase in reserved hours as faculty and departments take advantage of the two additional computer classrooms. In the coming years, CLM expects faculty members to continue to adopt and integrate more educational technology into their classroom teaching. Consequently the demand for technology-aided and technology-focused classes will grow. Therefore, CLM is looking for additional ways to add computer classrooms or reconfigure existing rooms to add more computer stations.

Some of the significant items from Spring 2014 include:
- CLM added two new computer classrooms in the Shields Library in Winter 2014. The total class hours reserved has increased dramatically, mostly due to the new classrooms. The 13-14 academic year reached 16,795 reserved hours (2,168 more than the 12-13 academic year and the highest in CLM history). Based on the existing reservations for 14-15 we expect another large increase in reserved hours.
- CLM took on management of the Arts Group's three computer rooms (Design, Art and Cinema & Technoculture). ATS and the Arts Group signed a MOU in May 2014. CLM started migrating two of the rooms in June and will complete all three over Summer 2014.
- The number of logins has remained fairly consistent over the past few years, but is lower than the peak in 08-09. The number of unique users is slowly increasing, most likely keeping pace with the increasing number of students.
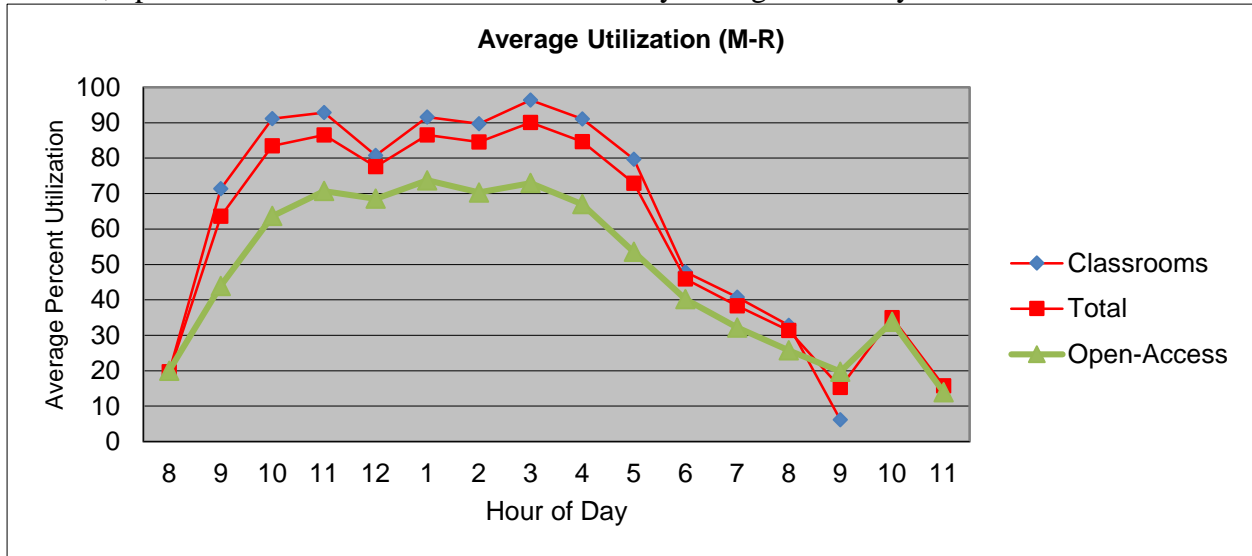 The decrease in number of logins has several likely causes:
    o Increased ownership of laptops and smartphones reducing student need for accessing the computer rooms.
    o The Fall 2009 printing rate change decreased printing demand and therefore logins.
    o Increased reserved class hours reducing the time available for drop-in student use.
    o Decrease of open hours – CLM dramatically cut evening and weekend available hours in response to budget issues.
- CLM prepared for Summer 2014 upgrades by purchasing hardware and software, implementing and testing software configurations, scheduling projection upgrades, and developing a summer project plan.
- CLM conducted a faculty survey about computer room use. The results are posted at http://clm.ucdavis.edu/pubs/survey/faculty_s14.html. In addition, CLM surveyed students regarding SmartPhone and Laptop use. Those results are at http://clm.ucdavis.edu/pubs/survey/student-s14-smartphone.html and http://clm.ucdavis.edu/pubs/survey/student-s14-laptop.html.

Spring 2014 Statistical Summary

Utilization

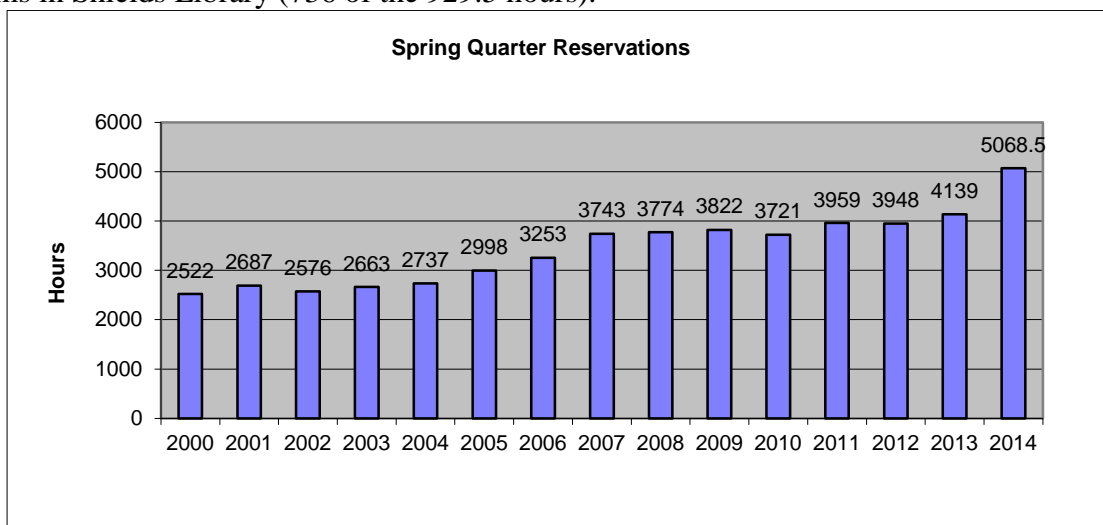### Overall computer room utilization

Computer Lab Management operates 20 computer rooms at UC Davis. The general trend of high usage from 10am to 5pm continued during Spring 2014. The graph below shows average utilization for classrooms, open-access labs and all rooms for Monday through Thursday.

Average Utilization (M-R)

Classrooms use is very high – averaging over 90% for most of the peak class times. Open-access utilization is lower, but since it is an average across the entire quarter it doesn't give a sense of peak use. Many of the open-access labs also experience wait lines during busy times of the quarter. The maximum wait line was 28 people waiting for a computer on June 5th.
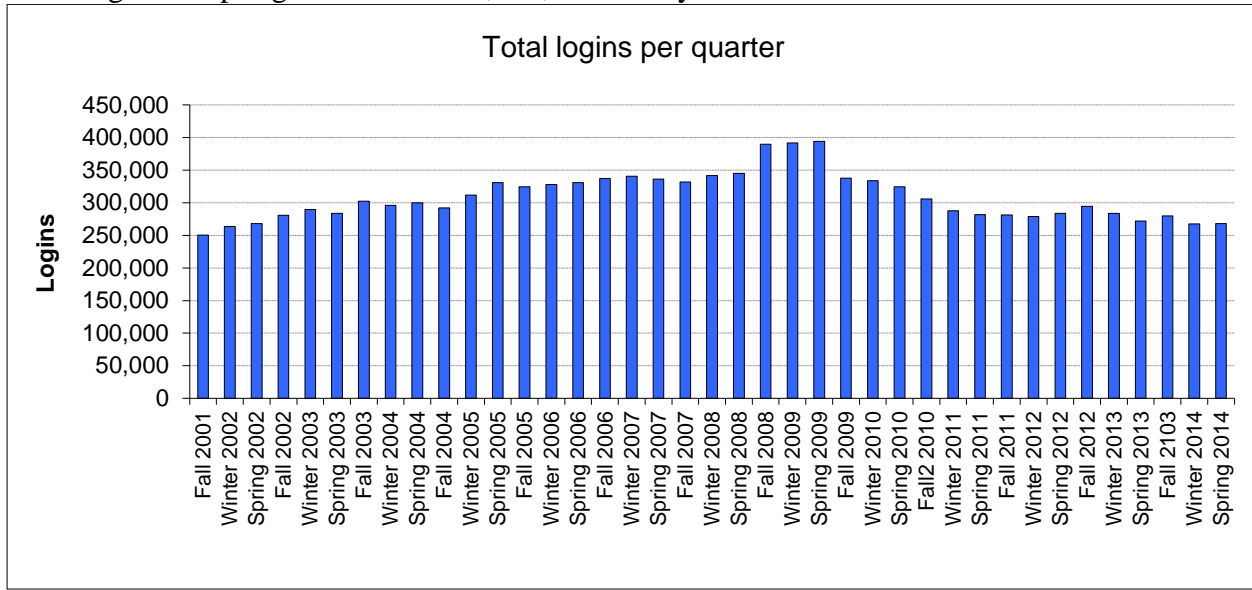
Class Use

During Spring 2014 there were 5,068.5 class hours reserved in the computer classrooms. This is the largest amount in CLM history. The huge increase from Spring 2013 is mostly due to the two new classrooms in Shields Library (736 of the 929.5 hours).

Spring Quarter Reservations

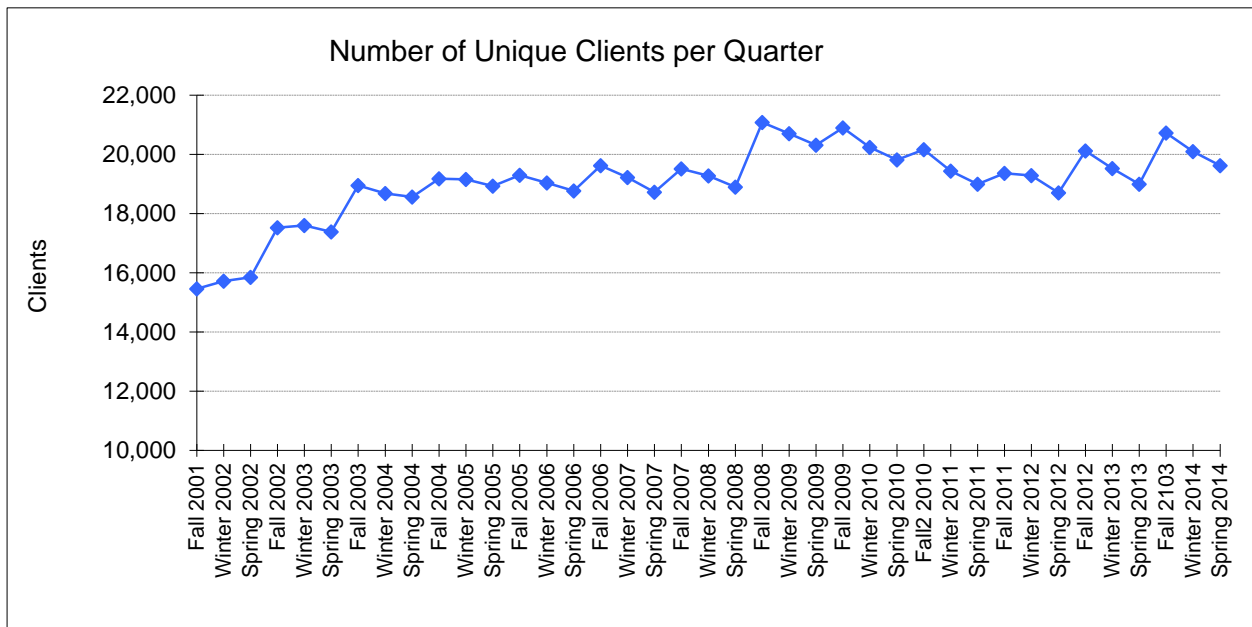In addition, there were 232 class software installs and 130 class folders created during Spring 2014.

Number of Logins and Users
The total logins in Spring 2014 were 268,233, essentially the same as Winter 2014.

Total logins per quarter

A bar chart titled "Total logins per quarter" showing Logins (y-axis, 0 to 450,000) across quarters from Fall 2001 to Spring 2014.

Unique Users
The number of unique clients decreased to 19,692 in Spring 2014. Of these, 19,080 were students. This is a decrease of 468 clients from Winter 2014. The decrease is normal as the total number of students at UC Davis typically drops from Fall to Spring quarter.
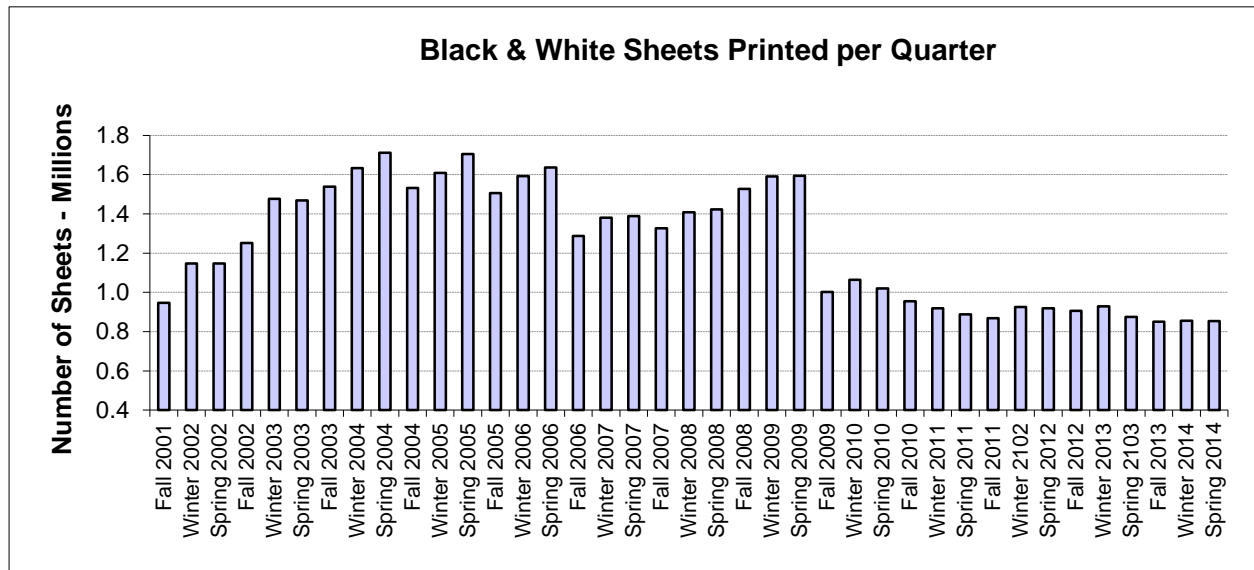
Number of Unique Clients per Quarter

A line chart titled "Number of Unique Clients per Quarter" showing Clients (y-axis, 10,000 to 22,000) across quarters from Fall 2001 to Spring 2014.
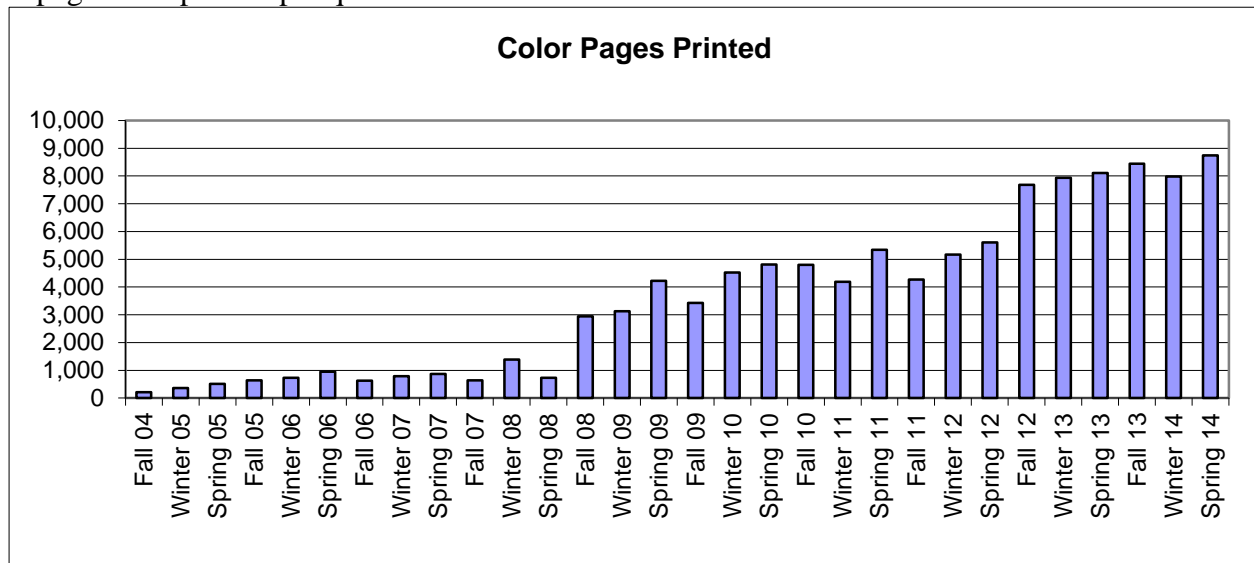
Virtual Lab Users

The IET Virtual Lab was used 6,313 times by 988 unique clients. This was a 14% drop of logins from Winter 2014. We are not sure what caused the drop, perhaps there were fewer classes that required the specialized software offered during Spring 2014.
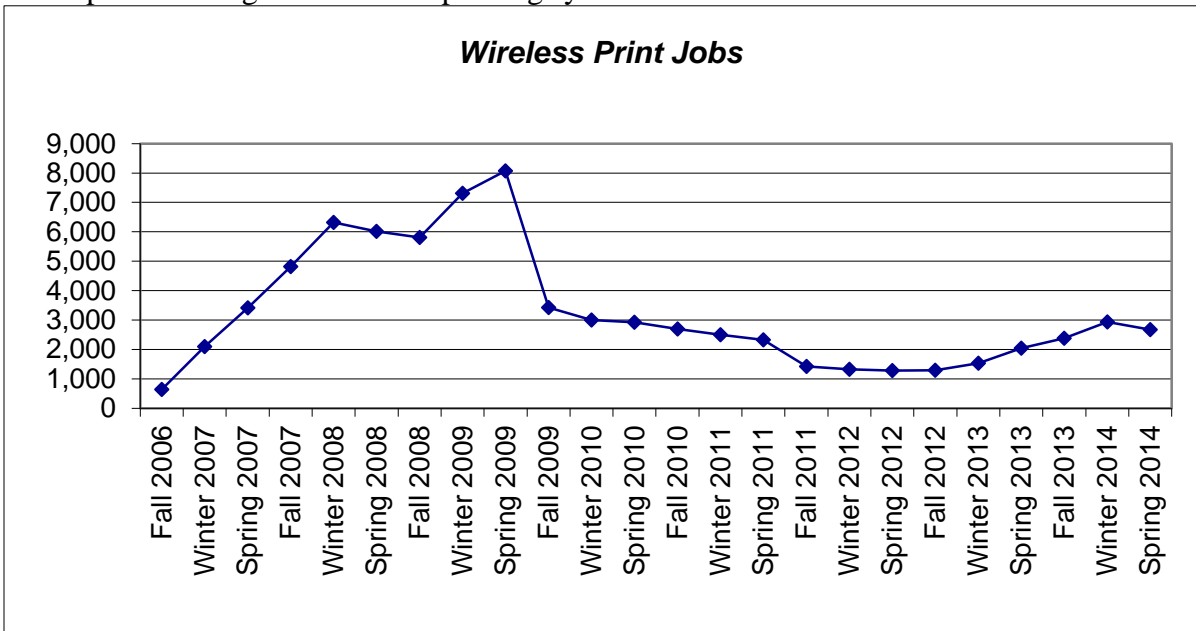
Printing

The total sheets printed in Spring 2014 decreased to 853,040 (a drop of 2.4%). The average sheets printed per client (of those who printed) was 50.00. The amount printed was fairly consistent over the 13-14 academic year. The large decrease from 08-09 was due to the change in printing rates at the start of Fall 2009.

There were 8,744 color pages printed, an increase of 769 from Winter 2014. This is the highest total of color pages ever printed per quarter.

There were 2,673 wireless print jobs, an increase of 508 from Winter 2013. There were 421 unique clients who printed though the wireless printing system.
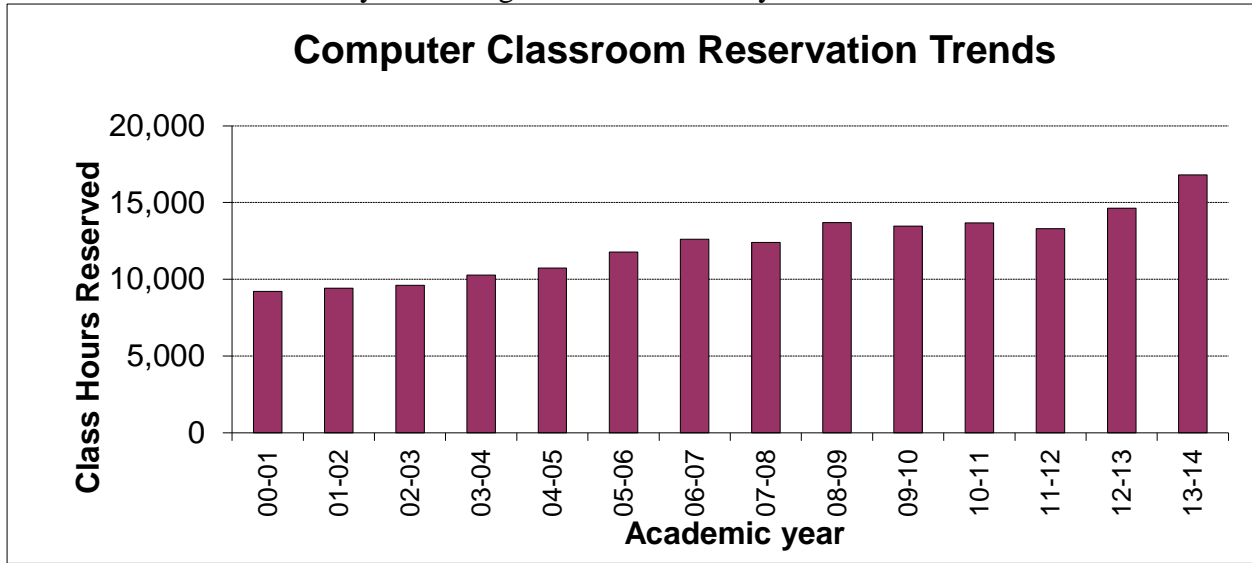
Wireless Print Jobs

The drop in wireless printing usage from the 08-09 level is most likely due in part to the overall drop in printing caused by the printing rate increase.
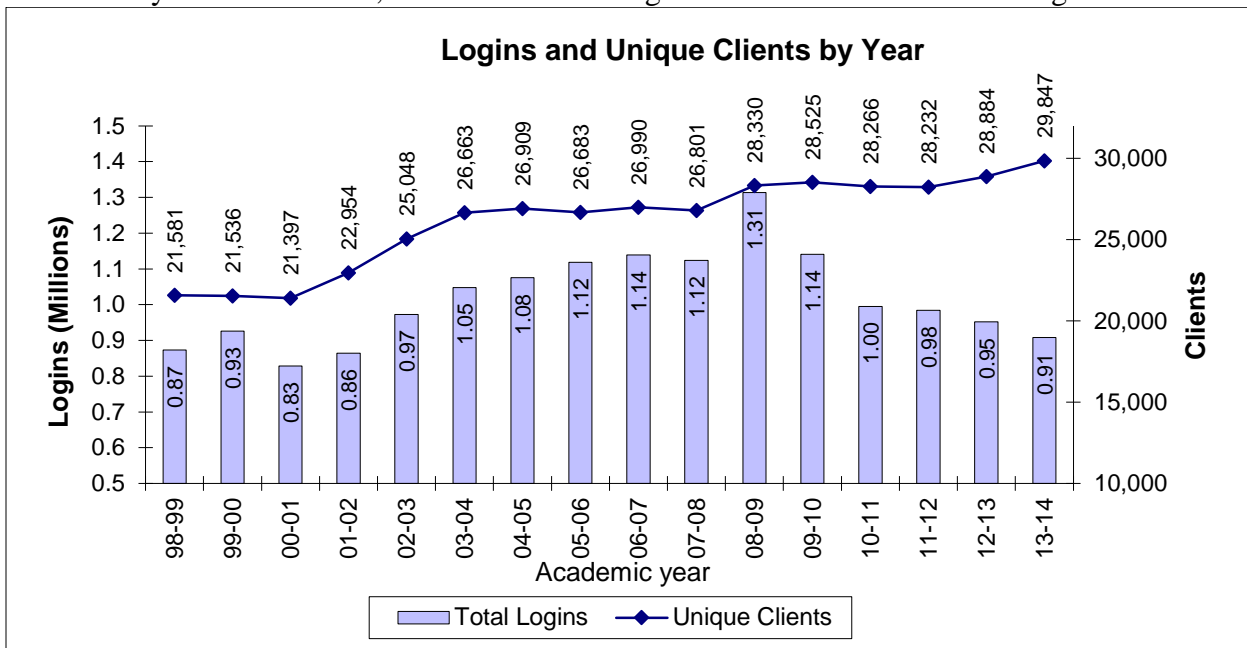
Review of Annual Data

CLM includes annual trends in this quarterly report since Spring quarter is the end of the academic year.

The overall computer classroom reserved hours increased dramatically. This was mostly due to adding two new computer classrooms in Shields Library in Winter 2014. The 16,795 reserved hours is 2,168 hours more than 12-13 and is by far the highest in CLM history.

Computer Classroom Reservation Trends

The total number of logins has dropped slightly from 12-13 (down 4.6%). The number of unique clients increased by 963 from 12-13, which makes sense given that UC Davis is admitting more students.
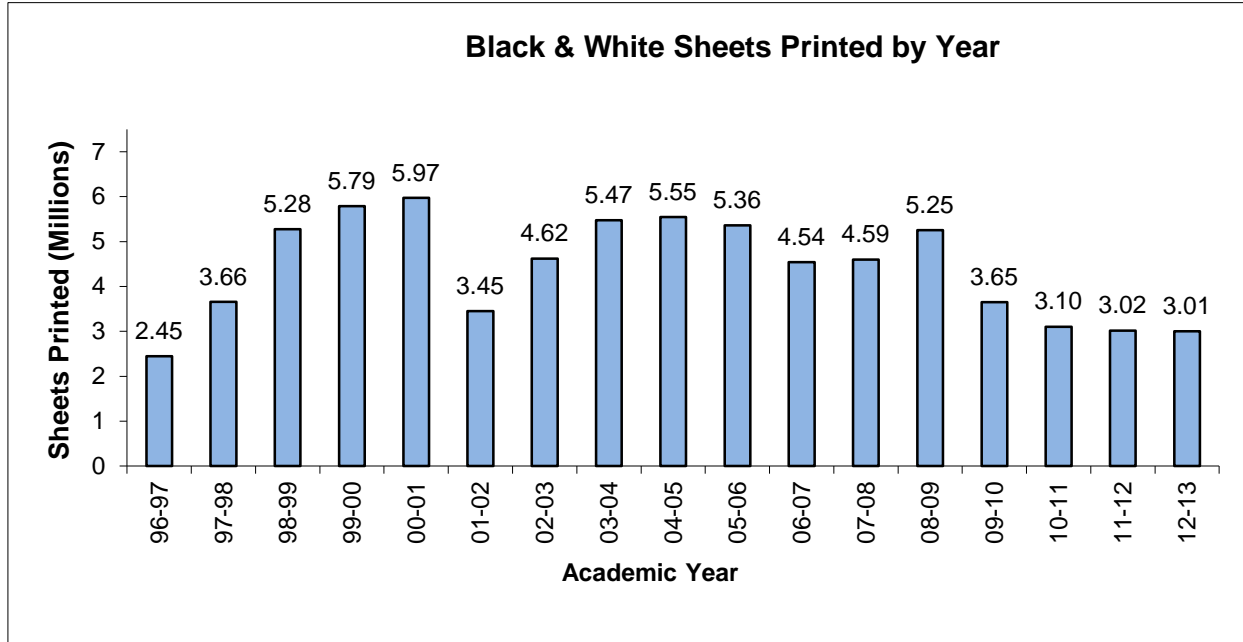
Logins and Unique Clients by Year

The decrease in number of logins from 08-09 has several likely causes:
- Increased ownership of laptops and smartphones reducing student need for accessing the computer rooms.
- The Fall 2009 printing rate change decreased printing demand and therefore logins.
- Increased reserved class hours reducing the time available for drop-in student use.

- Decrease of open hours – CLM dramatically cut evening and weekend available hours in response to budget issues.

The number of black & white sheets printed per year dropped dramatically from 08-09 due to the printing rate increase in Fall 2009. However, the sheets printed have appears to level out in recent years. We expected that sheets printed would drop significantly initially but then slowly increase as students become accustomed to the new rate. It remains to be seen if the printing levels will increase in the future.

Black & White Sheets Printed by Year

Academic Year	Sheets Printed (Millions)
96-97	2.45
97-98	3.66
98-99	5.28
99-00	5.79
00-01	5.97
01-02	3.45
02-03	4.62
03-04	5.47
04-05	5.55
05-06	5.36
06-07	4.54
07-08	4.59
08-09	5.25
09-10	3.65
10-11	3.10
11-12	3.02
12-13	3.01

The number of color pages printed per year has grown dramatically over the past few years. CLM increased the number of rooms with color printers in Summer 2008 and Summer 2012 which led to the large jumps those years.

Color Pages Printed by Year

Year	Color Pages Printed
04-05	1,089
05-06	2,636
06-07	2,481
07-08	2,794
08-09	11,224
09-10	14,183
10-11	15,673
11-12	16,865
12-13	25,635
13-14	27,540