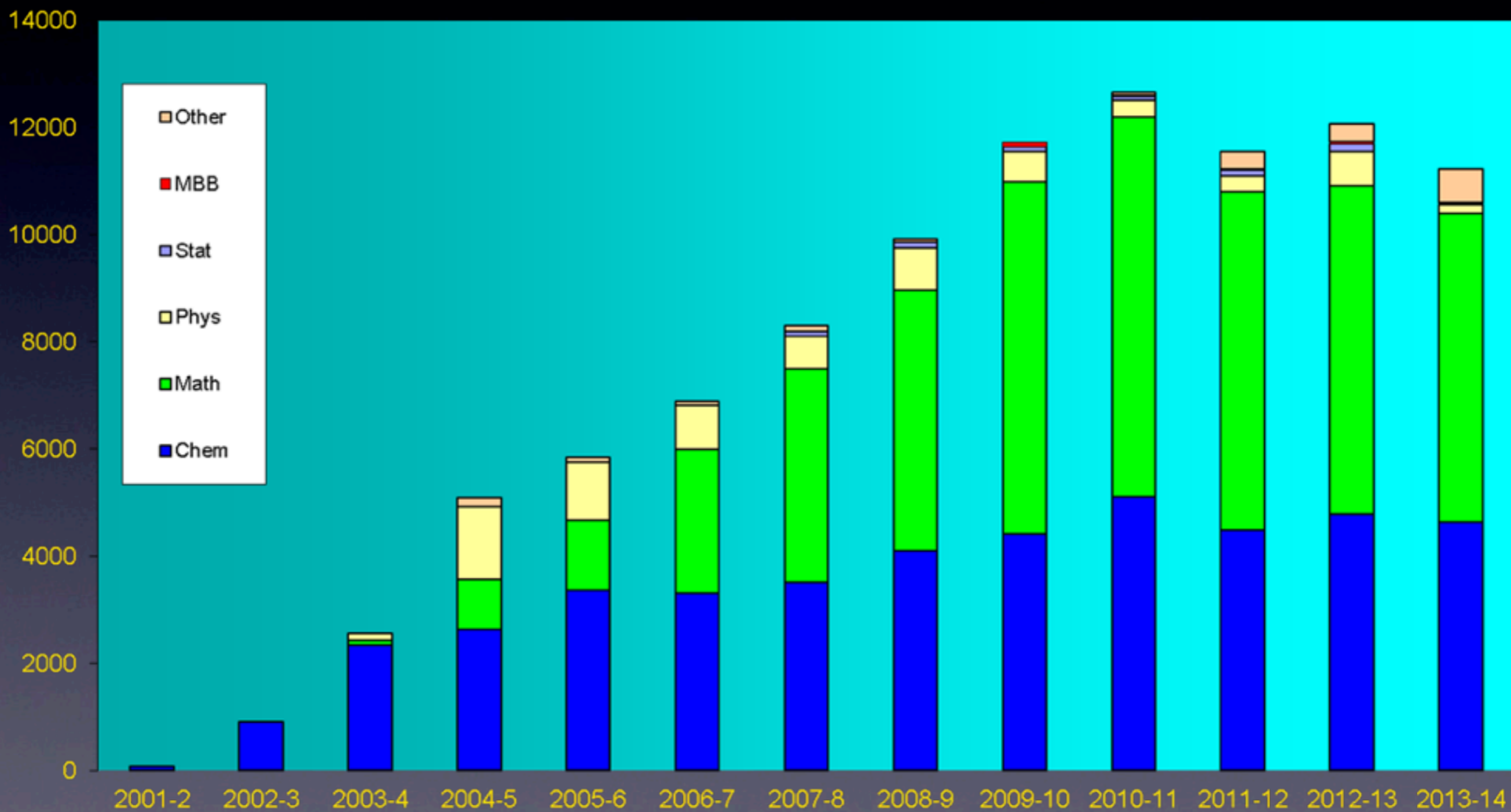# *CAPA* / *LON-CAPA* at Simon Fraser University

SFU

- 1995 - 2001 *CAPA* (Phys & Chem Depts)

- 2001 transition to *LON-CAPA*

  - SFU IT Services maintains Fac. Sci. servers

- 2004 Math introduces *LON-CAPA and by 2008 has become the major user Dept.*

- 2008 SFU joins *LON-CAPA* Academic Consortium, as Associate member, and hosts Annual Conference.

- Currently: dedicated blade Library Server; RHEL5; *LON-CAPA* 2.10.1; 200/300GB data.

  - 3 Access servers are VMs.

- Planned upgrade to *LON-CAPA* 2.11 and RHEL6

  - Library server will move to a VM, with readily expandable remote file space.

LON-CAPA Annual Course Enrolments

Large Class Management Issues:

e.g. CHEM121 Fall 2013

✳

- 850 students (many enrolment changes during Weeks 1 - 3)

- 2 Campuses -- 3 Lecture sections -- 31 Tutorial sections

- 14 Lab sections -- 12 "LabDays"

- 2 Lab Rooms (rooms sometimes shared with other concurrent courses)

- 4 Instructors -- 4 Lab Technicians -- 22 TAs

- Weekly homework -- Pre-labs, -- During- and Post-lab Reports

- Several Exam Rooms -- Assigned seating -- Multiple Exam Versions

- Need to conscientiously coordinate marking and provide timely feedback to individual students.

1. Many **changes in enrolment** requires daily roster updates with management of individual's course section, lab group, dates of assignments etc
2. **No 1:1 correlation between Lab sections and LabDays**
3. **Alternating or rotating lab schedules for different groups in some courses.**
4. Exams, **appropriately spaced assigned seating** and **exam version control** are needed.
5. Input from diverse Instructors and TAs needs to be coordinated and **secure.**

Automated Assessments for high-enrolment courses

- SFU Chemistry Courses *regularly* using LON-CAPA

  - Chem110 Introductory Chemistry   Lecture

  - Chem111 Introductory Chemistry and Laboratory

  - Chem120 General Chemistry I

  - Chem121 General Chemistry and Laboratory I

  - Chem122 General Chemistry II

  - Chem126 General Chemistry Laboratory II

  - Chem215 Introduction to Analytical Chemistry Lecture & Laboratory

  - Chem281 Organic Chemistry I Laboratory

- Chem109 & Chem192 & SCI300 more recently. CHEM232, CHEM316, CHEM360 occasionally, Chem286 previously...
- MBB362, Phys101 and Phys102 also regularly use LON-CAPA (instructor dependent)
- Anticipate more use in other Organic Chem courses in future, especially Labs.
- Most lower level Math courses..... cf J. Gray, V. Jungic et. al.

SFU

Overview by Tasks in Chemistry

I.   Lecture homework

A.   Regular assignments

- in Intro, General, Analytical

- sometimes Physical, Organic

B.   Quizzes/Tests/Surveys

II.   Laboratories

A. Pre-lab homework assignments

B. Managing 'Unknowns'

C. Reports

D. 'Dry-labs'

III.   Exams (paper)

A.   Bubble sheet / Machine-graded

1. Multiple Choice

2. Numerical

B. Written / Marker-graded

IV. Application Forms

- Submission, review & ranking

Homework, Prelabs, Lab Reports (during- and post-Lab) and Exams are in constant use.
Note that this involved many different instructors.
We use trimester system with different people teaching courses each trimester -- each with
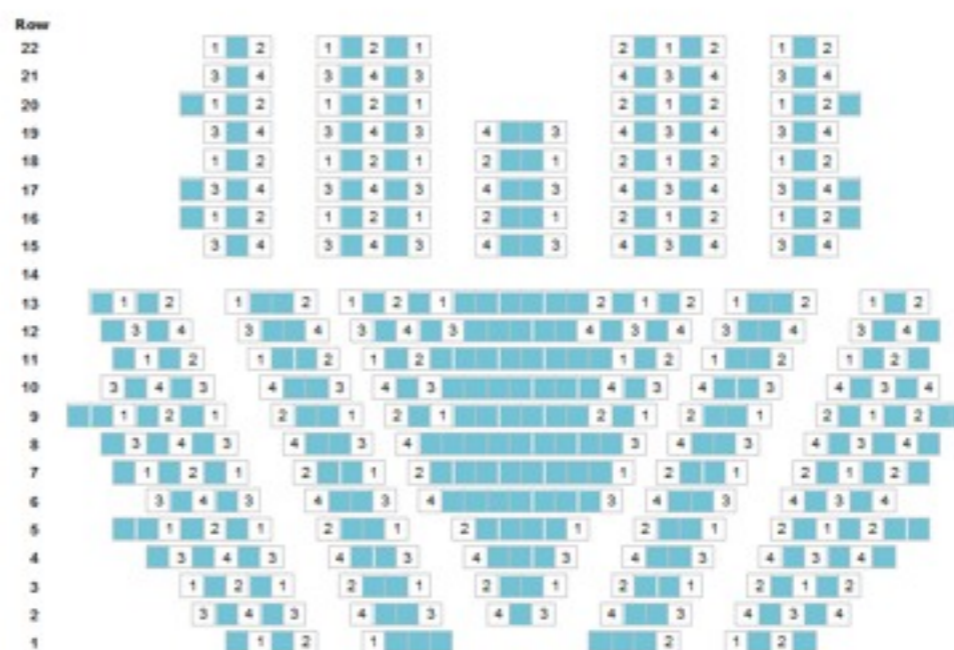their own preferences and methods.

Exams

- All 1st-year Chem Exams in LON-CAPA
  - Multiple Choice
  - Numerical
  - Written
- Pre-assigned specific versions.
- Cumulative stats aid in selection of questions.
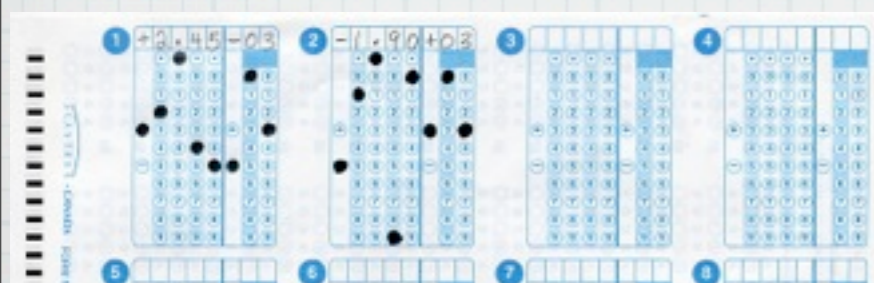- Grading comments displayed in LON-CAPA ("Score Upload")

Final

Department of Chemistry
Exam Seating Chart

Exam Room: C9001
Exam Date: 09-Dec-2011
Exam Time: 12:00 PM

CHEM122_20113_BRNBY

Version	CODE	Quantity
1	4971	63
2	6300	63
3	7170	61
4	9837	61
	Total	248

SFU

SIMON FRASER UNIVERSITY
Department of Chemistry

Marks Course Grading Program
Version V02.01.18
15-Dec-2013

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1) Jan 2005 South Carolina – Scantron Exams –– Guy Albertelli
2) Summer Semester 2005 implemented for Chem110/111–Gerrit Keizer
3) Subsequently, 1–, 2– or 3–part exams, all generated and printed from LON–CAPA.
4) Why? Numerous reasons –– not necessarily individually compelling, but collectively so.
   a) It becomes relatively effortless to generate new versions of exams, as needed.
   b)   Complete control over dynamically generated content.
   c)   Provides a permanent and cumulative association of assessment resources with statistics reflecting their effectiveness.
   d)   By creating and grading exams in LON–CAPA, we are now able to easily maintain a semi–quantitative evaluation of every Exam question, which can be readily reviewed when selecting questions for a new exam.

Individual's Chem122_Spring_2014 Midterm Results as displayed in *LON-CAPA*

Midterm Results

Total: Mks/Pts = 21.75/24

Multiple Choice: Mks/Pts = 16/18

Numerical: Mks/Pts = 3/3

Written: Mks/Pts = 2.75/3.00

Exam Version: 2222

Your Choices: bdbbdaaead eeaccbec

Exam Answers: bdbbdaaead eeaccebc

Point Values: 1111111111 11111111

Q1: Student Ans = 1.14E+15 Exam Ans = 1.14E+15 ± 5.68E+13 Pts = 1 Score = 1
Q2: Student Ans = 9.28E-06 Exam Ans = 9.29E-06 ± 4.64E-07 Pts = 1 Score = 1
Q3: Student Ans = 0.00499 Exam Ans = 0.00499 ± 9.98E-05 Pts = 1 Score = 1

Class Average: 15.07/24