



## MEMORANDUM

To: Benjamin Lake, Jr., Superintendent Mechanical Shop  
From: Eric Chu, FSA III  
Subject: **Machine Shop 2015/2016 Fiscal Year End Report**  
Date: September 9th, 2016  
Cc: A.W. Flounders, N. Melton

This memorandum documents the financial status of the Cory Hall Machine Shop at the end of fiscal year 2015/16. Fiscal Year 2015/2016 was positive for the COE Cory Hall Machine Shop with collected revenues of \$629,122.94. Expenditures were \$611,969.65 of which rechargeable materials totaled \$80,002.68. The total amount of rechargeable materials recovered was \$84,404.98. The previous fiscal year carryforward deficit of \$22,860.84 minus the current YTD income of \$21,555.59 equals to \$1,305.25, which is within the campus' acceptable tolerance for a recharge operation. This deficit will be carried forward into fiscal year 2015/2016.

This fiscal year 45 PIs and other groups from UCB departments (EECS, ERSO, COE, CHEME, MSE, MECHE, CITRIS, BIOENG, PHYSICS, MCB, CEE, NUC ENG & MATH), supported the Machine Shop. The shop completed 374 jobs for its customers and had an additional 41 open at year end. Of the completed jobs, 130 were performed for the Marvell NanoLab, and the remaining 244 for other customers.

A recharge rate proposal was submitted to the College of Engineering Dean's office February 2<sup>nd</sup>, 2016 with the new proposed rate of \$94.18. The College of Engineering Dean's office approved the new rate on February 5<sup>th</sup>, 2016.

### 2016/2017 Cory Hall Machine Shop Recharge Rates, Effective July 2016

	Fiscal Year 2015-2016	Fiscal Year 2016-2017
<b>General Labor Rate</b>	<b>\$ 89.50</b>	<b>\$ 94.18</b>

Table 1.

**Cory Hall Machine Shop Financial Summary  
Fiscal Year 2015-2016**

	<b>Projected</b>	<b>Actual</b>
<b>(S&amp;E) Supplies and Expenses</b>	<b>\$ 47,016.00</b>	<b>\$ 30,170.59</b>
<b><u>*(S&amp;B) Salaries and Benefits Expense</u></b>	<b><u>\$ 522,922.00</u></b>	<b><u>\$ 581,799.06</u></b>
<b><u>Total Expense:</u></b>	<b><u>\$ 569,938.00</u></b>	<b><u>\$ 611,969.65</u></b>
<b><u>Recharge Income:</u></b>	<b><u>\$592,798.84</u></b>	<b><u>\$ 629,122.94</u></b>
<b><u>Net:</u></b>		<b><u>\$ 17,153.29</u></b>
<b>**Rechargeable Materials Expense</b>		<b>\$(80,002.68)</b>
<b>Rechargeable Materials Income</b>		<b><u>\$ 84,404.98</u></b>
		<b>*** \$ 4,402.30</b>
<b>Negative Carry Forward Balance from FY 2015/2016</b>		<b>(\$22,860.84)</b>
<b>Total Negative Carry Forward Balance to FY 2016/2017</b>		<b>(\$1,305.25)</b>

**Table 2.**

\*Salaries and Benefits include:

- a. 1.00 FTE of Engineering Technical Supervisor 2 (Lake) - 12 months
- b. 0.80 FTE of Principal Laboratory Mechanician (Gavazza) - 12 months
- c. 1.00 FTE of Development Technician V (Amaral) - 12 months
- d. 0.75 FTE of Development Technician V (King) – 12 Months
- e. 0.75 FTE of Development Technician V (Ahtty) - 12 months
- f. 0.50 FTE of Administrative Assistant III (Chu) - 12 months

\*\*Expenses for parts and materials dedicated to rechargeable projects.

\*\*\* Recovered materials balance throughout the year when stock items are used for jobs.

Not included: 1) 0.20 FTE of one PLM paid for by EECS in return for 293 hours of Pro Forma work 0.25 FTE of one Dev. Tech. V (Ahtty) supported by Marvell NanoLab for 12 months, 0.25 FTE of one Dev. Tech. V (King) supported by Marvell NanoLab for 12 months and 0.50 FT of one Administrative Assistant III (Chu) for 12 months.

Salaries and benefits expenses were affected by cost of: 1) UPTE contractual increases for all Dev. Tech. V positions; 2) CUE-IBT contractual increases for AAIII position; 3) Recharge materials cannot be projected since they are custom to each job. These material amounts were fully recharged to the various jobs with which they were associated.

<b>Recharge Hours Accounting</b>	<b>Hours</b>
<b>Non-Recharge Hours 2015/16</b>	
1. Benefits (SL, VL, Holiday)- Actual	1,807.00
2. Std Overhead (See below)	540.00
3. Other Overhead (See below)	786.00
4. ProForma	293.00
<b>Rechargeable Hours 2015-2016</b>	7029.3
Machine Shop Labor Rate Per Hour	\$89.50
Income from Recharge Hours (Total Rechargeable Hours x Machine Shop Labor Rate Per Hour)	<b>\$ 629,122.94</b>

**Table 3.**

Explanation of **Table 3.**

1. Benefits for 1 FTE are accrued at a rate of 8 hrs. SL/month; 13.3 hrs. VL/month (shop average); and 13-paid holidays/annum (8.7 hrs. /month). Average total benefits accrued annually are 360 hours per FTE. Benefits actually taken were 1,807.00 hours.
2. Standard overhead of 1/2 hr. /day per FTE includes two 15-minute breaks.
3. Other overhead includes clean-up; recording; non-rechargeable training; supervisory functions such as quotation, job prioritization and performance evaluations; consultation and advising in support of departmental activities; shop maintenance; meetings; consultation with MSE superintendent and administrative supervisor, etc.
4. The EECS Department provided 0.20 FTE salary of one Principal Laboratory Mechanician to cover departmental projects. In return, the Machine Shop delivered 293 hours of work. In FY 2015/16 this will amount to 293 hours, the full value of 0.20 FTE at \$89.50/hr.

**Principal Investigator Summary  
Fiscal Year 2015/2016**

<b>Principal Investigator Summary for Fiscal Year 2016</b>					
<b>PI</b>	<b>Total Jobs</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Material Cost</b>	<b>Recharged Total</b>
<b>William Flounders (NanoLab)</b>	166	4097.5	\$366,726.25	\$29,951.97	\$396,678.22
<b>Scott McNally (EECS)</b>	58	825.5	\$73,882.25	\$16,031.98	\$89,914.23
<b>Christopher Brooks (EECS)</b>	3	184.5	\$16,512.75	\$8,913.17	\$25,425.92
<b>Vivek Subramanian (EECS)</b>	8	226.5	\$20,271.75	\$671.74	\$20,943.49
<b>Domenico Caramagno (CITRIS)</b>	3	204.0	\$18,258.00	\$143.04	\$18,401.04
<b>Sayeeef Salahuddin (EECS)</b>	10	118.5	\$10,605.75	\$2,226.34	\$12,832.09
<b>Joel Ager (MSE)</b>	2	103.5	\$9,263.25	\$2,576.54	\$11,839.79
<b>Connie Chang-Hasnain (EECS)</b>	9	100.0	\$8,950.00	\$2,737.42	\$11,687.42
<b>Katherina Law (EECS)</b>	1	127.0	\$11,366.50	\$91.14	\$11,457.64
<b>Ruzena Bajcsy (EECS)</b>	2	71.0	\$6,354.50	\$4,120.95	\$10,475.45
<b>Laura Waller (EECS)</b>	3	66.5	\$5,951.75	\$3,604.16	\$9,555.91
<b>Ali Javey (EECS)</b>	9	83.5	\$7,473.25	\$1,436.11	\$8,909.36
<b>Lane Martin (MSE)</b>	8	66.5	\$5,951.75	\$853.09	\$6,804.84
<b>Carlyn Chinen (Amplab)</b>	6	59.5	\$5,325.25	\$803.94	\$6,129.19
<b>Phillip Messersmith (MSE)</b>	6	59.5	\$5,325.25	\$387.36	\$5,712.61
<b>Jennifer Teverbaugh (COE)</b>	4	46.0	\$4,117.00	\$537.78	\$4,654.78
<b>Michel Maharbiz (EECS)</b>	8	44.5	\$3,982.75	\$56.58	\$4,039.33
<b>Clark Nguyen (EECS)</b>	2	29.0	\$2,595.50	\$644.98	\$3,240.48
<b>Ming Wu (EECS)</b>	8	33.5	\$2,998.25	\$225.58	\$3,223.83
<b>Masayoshi Tomizuka (MECHE)</b>	2	34.5	\$3,087.75	\$120.00	\$3,207.75
<b>Ana Claudia Arias (EECS)</b>	8	21.0	\$1,879.50	\$1,313.47	\$3,192.97
<b>Chris Kumai (MSE)</b>	1	26.5	\$2,371.75	\$663.31	\$3,035.06
<b>Steven Glaser (CEE)</b>	6	30.0	\$2,685.00	\$304.51	\$2,989.51
<b>AM Fitzgerald (BNLA)</b>	4	25.5	\$2,282.25	\$33.50	\$2,315.75
<b>Kenneth Lutz (BWRC)</b>	1	22.5	\$2,013.75	\$34.11	\$2,047.86
<b>John Huggins (BSAC)</b>	3	14.0	\$1,253.00	\$775.91	\$2,028.91
<b>Anca Dragan (EECS)</b>	5	17.0	\$1,521.50	\$421.64	\$1,943.14
<b>Kevin Mullally (EECS)</b>	2	21.0	\$1,879.50	\$0.00	\$1,879.50
<b>Digby MacDonald (MSE)/(NUC)</b>	5	20.5	\$1,834.75	\$0.00	\$1,834.75
<b>Costas Spanos (EECS)</b>	3	13.0	\$1,163.50	\$653.09	\$1,816.59
<b>Costas Grigorpoulos (MECHE)</b>	2	16.5	\$1,476.75	\$312.00	\$1,788.75
<b>Tsu-Jae King Liu (EECS)</b>	4	16.5	\$1,476.75	\$133.36	\$1,610.11
<b>Niren Murthy (BIOENG)</b>	1	12.0	\$1,074.00	\$406.00	\$1,480.00
<b>Allen Goldstein (CEE)</b>	1	16.5	\$1,476.75	\$0.00	\$1,476.75
<b>Cathy Jen (ERSO)</b>	7	14.0	\$1,253.00	\$0.00	\$1,253.00
<b>Susanne Kauer (EECS)</b>	1	12.5	\$1,118.75	\$0.00	\$1,118.75

Richard White (EECS)	3	12.0	\$1,074.00	\$39.40	\$1,113.40
Dan Essley (MECHE)	1	11.0	\$984.50	\$0.00	\$984.50
Xavier Darzacq (MCB)	2	9.0	\$805.50	\$95.09	\$900.59
Kevin Healy (MSE)	1	8.0	\$716.00	\$179.08	\$895.08
Adam Arkin (BIOENG)	1	7.0	\$626.50	\$262.89	\$889.39
Siu-mei Man (UCSF)	1	8.5	\$760.75	\$73.29	\$834.04
Koushik Sen (CS)	3	8.0	\$716.00	\$75.32	\$791.32
Leor Weinberger (UCSF)	2	7.0	\$626.50	\$154.70	\$781.20
Scott Shackleton (COE)	1	6.5	\$581.75	\$0.00	\$581.75
<b>QuSwami (BNLA)</b>	2	5.0	\$447.50	\$76.00	\$523.50
Xiang Zhang (MECHE)	1	5.0	\$447.50	\$21.02	\$468.52
Jeff Bokor (EECS)	3	5.0	\$447.50	\$5.00	\$452.50
Eli Yablonovitch (EECS)	2	4.5	\$402.75	\$0.00	\$402.75
Sharon Lilly (CEE)	1	4.5	\$402.75	\$0.00	\$402.75
Ting Xu (CHEME)	1	4.0	\$358.00	\$30.00	\$388.00
Scott Shenker (EECS)	2	4.0	\$358.00	\$0.00	\$358.00
Susan Madison (EECS)	1	4.0	\$358.00	\$0.00	\$358.00
Shankar Sastry (EECS)	1	1.5	\$134.25	\$177.34	\$311.59
Rebecca Pauling (MATH)	1	3.0	\$268.50	\$20.00	\$288.50
Vladimir Stojanovic (EECS)	1	3.0	\$268.50	\$0.00	\$268.50
Jacquelyn Garcia (CEE)	1	2.5	\$223.75	\$0.00	\$223.75
David Wagner (EECS)	1	2.0	\$179.00	\$0.00	\$179.00
Kattt Atchley (AMPLAB)	1	2.0	\$179.00	\$0.00	\$179.00
Scott Moura (CEE)	1	1.0	\$89.50	\$5.00	\$94.50
Lydia Sohn (MECHE)	1	1.0	\$89.50	\$0.00	\$89.50
<b>Iris AO (BNLA)</b>	1	1.0	\$89.50	\$0.00	\$89.50
Michael Lustig (EECS)	1	1.0	\$89.50	\$0.00	\$89.50
Nipam Patel (MCB)	1	1.0	\$89.50	\$0.00	\$89.50
Ronald Fearing (EECS)	1	1.0	\$89.50	\$0.00	\$89.50
Elise Mills (ERSO)	1	0.5	\$44.75	\$0.00	\$44.75
Luke Lee (BSAC)	1	0.5	\$44.75	\$0.00	\$44.75
Accounting Adjustment		15.3	\$1,369.94	\$2,006.08	\$3,376.02
<b>Total</b>	<b>415</b>	<b>7029.3</b>	<b>\$629,122.94</b>	<b>\$ 84,404.98</b>	<b>\$ 713,527.92</b>

Table 4.

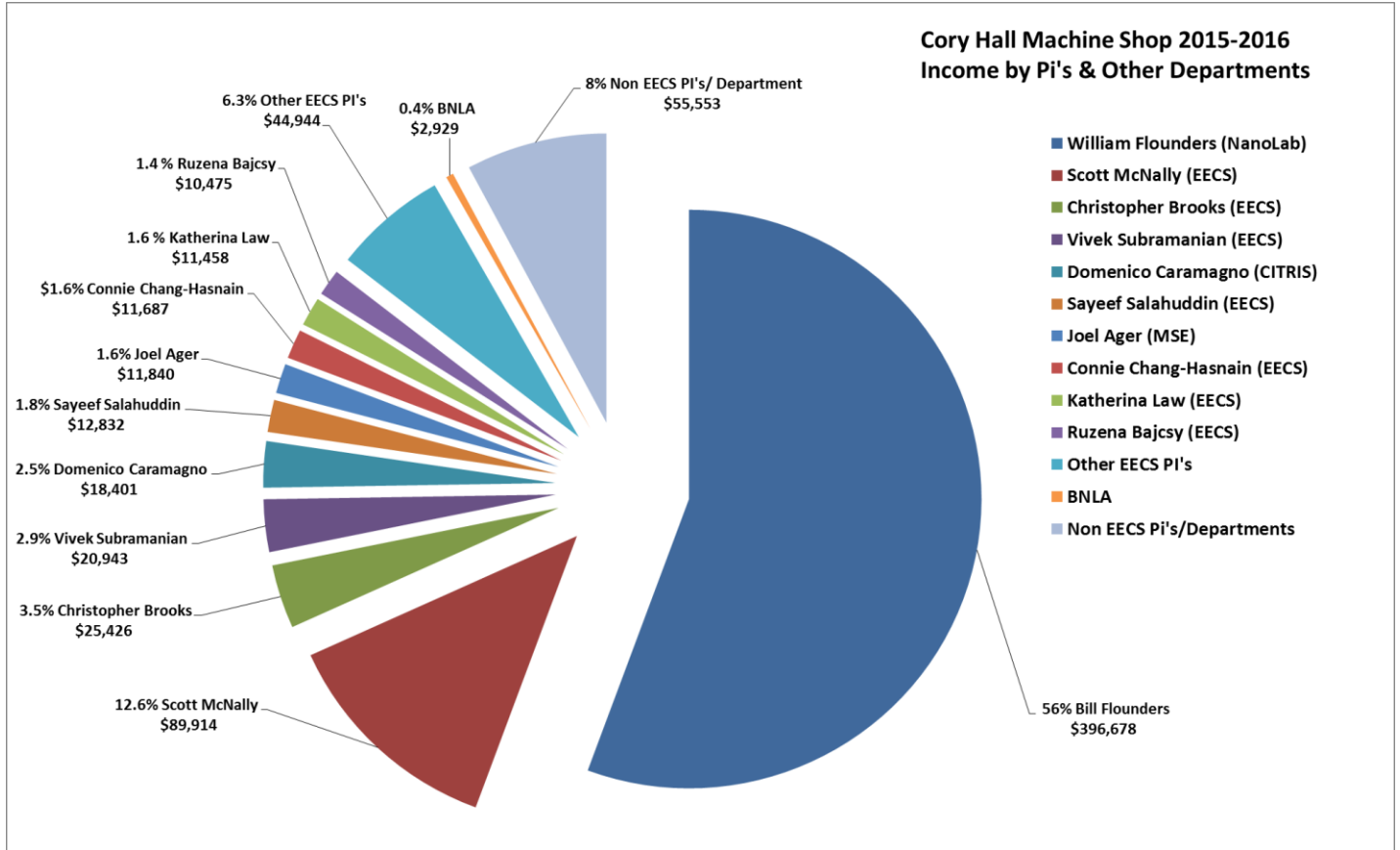


Figure 1: FY 2015-2016, Cory Hall Machine Shop Income Distribution by PI / Department.

2015-2016 Cory Hall Machine Shop Job Distribution

PI/Customer	Total Jobs
Bill Flounders (NanoLab)	166
EECS (McNally, 58; Pro-Forma, 22; and EECS PIs, 99)	179
Non-EECS (16 Different Departments and Industrial Companies)	70

Table. 5