

February 10, 2012

KENNETH VECCHIO  
Chair, Department of NanoEngineering  
0448

**Subject:**        *Department of NanoEngineering  
Audit & Management Advisory Services Project 2012-41*

The final audit report for Department of NanoEngineering, Audit Report 2012-41, is attached. We would like to thank all members of the department for their cooperation and assistance during the audit. Because we were able to reach agreement regarding corrective actions to be taken in response to the audit recommendations, a formal response to the report is not requested.

The findings included in this report will be added to our follow-up system. While management corrective actions have been included in the audit report, we may determine that additional audit procedures to validate the actions agreed to or implemented are warranted. We will contact you to schedule a review of the corrective actions, and will advise you when the findings are closed.

UC wide policy requires that all draft audit reports, both printed (copied on tan paper for ease of identification) and electronic, be destroyed after the final report is issued. Because draft reports can contain sensitive information, please either return these documents to AMAS personnel or destroy them at this time.

Stephanie Burke  
Assistant Vice Chancellor  
Audit & Management Advisory Services

Attachment

cc:     D. Larson  
       G. Matthews  
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**AUDIT & MANAGEMENT ADVISORY SERVICES**



University of California  
**San Diego**

**Department of NanoEngineering**  
**February 2012**

**Performed by:**

Ken Daniszewski, Auditor  
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**Approved by:**

Stephanie Burke, Assistant Vice Chancellor

Project Number: 2012-41

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**I. Background**

Audit & Management Advisory Services (AMAS) has completed a limited scope review of the Department of NanoEngineering as a part of the approved audit plan for Fiscal Year 2011-2012. This report summarizes the results of our review.

The Department of NanoEngineering (the Department) at UCSD is the sixth department within the Jacobs School of Engineering and was officially approved on July 1, 2007. Since its creation, the department has grown rapidly, and now has 17 faculty members. The faculty members are the Principle Investigators (PI) and co-PI's on nearly \$30 million in extramural research funding. The Department is the first of its kind in the US to offer both undergraduate and graduate degree programs in NanoEngineering. The Department admitted its first freshman class of students in Fall 2010. The Department also administers the Chemical Engineering undergraduate and graduate degree programs.

In Fiscal Year 2010-11, the Department incurred total expenditures of approximately \$7.7 million consisting of approximately \$3.6 million (47%) from state funds, \$3.6 million (47%) from federal funds, and \$0.5 million (6%) from other fund sources. Approximately 60% of departmental expenditures were for salaries and benefits, and 23% of expenditures were for supplies and expenses.

**II. Audit Objective, Scope, and Procedures**

The objective of our audit was to review key internal controls for departmental financial activity, and evaluate whether these internal controls provided reasonable assurance that financial activity was conducted in accordance with University and campus policies and procedures. This was not a full scope audit using a broad-based preliminary survey approach to evaluating department risk as prescribed by the Institute of Internal Auditors Standards for the Professional Practice of Internal Auditing. Rather, this was a limited scope review of key department internal controls for financial activities based on department management's assertions, and AMAS testing performed to validate those assertions. The scope of our review consisted of department financial activities in the prior and current fiscal years.

In order to fulfill our objective, we interviewed the Department Management Services Officer (MSO); evaluated the AMAS internal control questionnaires and separation of duties matrix completed by the MSO; reviewed department timekeeping, payroll, purchasing processes and travel; examined department financial reports, files, and documents; and performed limited transaction testing for selected financial activities, (**Attachment A**).

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**III. Conclusion**

Based on our procedures, we concluded that key internal controls we evaluated appeared adequate to provide reasonable assurance that financial activity was conducted in accordance with University and campus policies and procedures. However, we noted several opportunities for improvement in the department's internal control processes, as described in the following section.

**IV. Observations and Management Corrective Actions**

**A. Express Card Purchases**

**Oversight for Express Card activity did not ensure that purchasing activity was conducted in strict conformance with university policy.**

During our audit, we selected a non-scientific sample of 18 Express Card transactions for detailed review and tracing to source documents. Based on this review we noted the following issues:

**Source Documents**

**The Department Business Office did not have on file source documents to support a number of transactions selected for review.**

One of UC's key internal controls for Express Card activity is the requirement that the Cardholders submit vendor-provided source documentation to the Business Office for every Express Card purchase. UC Business and Finance Bulletin (BFB) BUS-43, Part 8 states that Cardholders must obtain source documentation (i.e. purchase receipts, vendor invoices, packing slips, etc.) from the vendor sufficient in detail to allow the reviewer to verify the items purchased.

However, for seven of the 18 transactions selected for review (39%), the Department Business Office did not have on file any vendor-provided source documents supporting the Express Card expenditures. We were advised that Express Cardholders often do not submit original vendor source documents (or copies) to the Business Office as required by policy. In lieu of the required vendor-provided documentation, the Business Office will accept a signature from the Cardholder or PI as evidence of the Express Card transaction. While the signatures did provide some level of assurance that the purchase was an appropriate expenditure, the University's requirement that source documentation for all Express Card purchases be provided to the Business Office would provide a higher level of assurance and accountability. This would also

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serve to reduce the risk that errors or irregularities could occur and go undetected.

Express Cardholders who chronically fail to submit supporting documentation to support their Express Card purchases should be considered for suspension or termination from the Express Card program.

**Express Card Transaction Review**

**Express Card transactions were sometimes allowed based on insufficient information.**

Another of UC's key controls over Express Card procurement is the requirement that every Express Card purchase be thoroughly reviewed by a transaction reviewer. UC Business and Finance Bulletin (BFB) BUS-43, Part 8 requires that Express Card transactions be documented in sufficient detail so as to enable transaction reviewers to identify questionable expenditures.

However, for four of the 18 transactions we tested, it was not possible to determine what had been purchased from the documentation on file. For three of these transactions, the documents on file contained no description of what had been purchased. For the remaining transaction, the Department had on file only a cash register receipt which contained a description of the item purchased but which was unintelligible. Therefore, it appears that the transactions were allowed to remain on Department funds without any basis for transaction reviewers to validate that the purchase was related to University business. The Business Office advised that they were able to learn via inquiry what had been purchased.

**Approvals**

**The process for reviewing the Chair's Express Card purchases was being completed by Department staff personnel that reported to the Chair.**

UC Business and Finance Bulletin (BFB) BUS-43, Part 8 states that Express Card reviewers may not be in a subordinate relationship to the Cardholder. However, during our review we noted that the Department Chair's Express Card purchases are being reviewed only by employees within the Business Office who report indirectly to the Department Chair.

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**Purchase Rebate**

**We noted one instance of noncompliance related to a vendor rebate.**

UCSD procurement policy on Blink provides that rebates offered either in the form of credits against future purchases or for goods or services at a substantially reduced cost are generally not accepted because of the administrative difficulty of tracking these credits and determining the sales and use tax associated with the resulting transactions. However, if a rebate is received, proper accounting and cash handling procedures require that the received rebate be formally tracked within the accounting system.

The supporting document for one sample item, a laminator purchased from an office supply store in July, 2010, indicated that a vendor rebate card was included in the transaction. The Department Business Officer advised that the rebate card had not yet been redeemed, but that the Cardholder has been directed to purchase printer toner cartridges with the rebate card.

**Management Corrective Actions:**

1. The Department Business Officer will inquire with the Dean's Office regarding Express Card practices in other departments.
2. The Department is in the process of hiring a Fiscal Assistant who will be charged, at the direction of the Department Business Officer, with reviewing Express Card activity.
3. The Department will remind all Express Cardholders that vendor source documents for all transactions should be forwarded to the Department Business Office. Compliance with this requirement will be monitored on an ongoing basis. The Department Business Office will consult with the Campus Express Card Program Team in determining whether suspension or termination from the program is appropriate for Cardholders who chronically fail to submit supporting documents to the Business office.
4. The Department Business Officer will direct transaction reviewers to more closely review Express Card transactions, and to ensure that all transactions are adequately described and documented.
5. In addition to the currently required mandatory Express Cardholder training, the Business Office will formulate additional training for Express Cardholders on an ongoing basis. The training will include guidance to Express Card holders and transaction reviewers

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regarding the University's policy to avoid purchases where the original purchase price is offset by a subsequent rebate to be provided by the vendor.

6. The Department will develop a process in which the Department Vice Chair, who also reports to the Dean, is involved in periodically reviewing the Department Chair's Express Card purchases.

**B. Employee Background Checks**

**Employee background checks were not always conducted for Department candidates for critical positions as required by University policy, primarily because the background checks were not clearly required by local policy. However, the Department consistently conducted reference checks on prior employment history.**

UC Personnel Policies for Staff Members, revised September 1, 2006, established new guidelines for critical positions calling for background checks. These guidelines designated an expanded number of University positions as critical positions requiring background checks. The guidelines also provided examples of University positions and functions that are critical in nature and called for background checks. We have been advised that is unclear to Department Business Officers how the examples should be used to determine when a background check is required.

Recently, the UCSD Human Resource Department issued guidance on the BLINK website requiring that each Vice Chancellor area must determine if a position is critical, and designate it to receive a background check using the broader UCOP guidelines. Prior to this change, the campus guidelines recommended background checks for certain positions, but generally left it up to the hiring department to initiate the process.

**Management Corrective Actions:**

The Department will work with Human Resources in determining whether posted positions are critical, and will request background checks where required.

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**C. Transaction Sampling**

**Transactions selected by the Transaction Sampling system were not reviewed and reconciled on a timely basis.**

The campus Transaction Sampling process in Financial Link randomly selects a sample of department financial transactions to be evaluated during the monthly operating ledger reconciliation and account validation process.

In order to assess the timeliness of the transaction sampling process within the department, AMAS examined a transaction sampling management report for the Department of NanoEngineering (org 416249) for the accounting period from May 1, 2011 to July 31, 2011. As of October, 2011 this report showed that 23 of 110 (21%) of sampled transactions had not been reviewed within 60 days.

Failure to review ledger transactions on a timely basis increases the risk that transaction processing errors might occur and not be timely corrected.

**Management Corrective Actions:**

The Department will ensure that transaction sampling is performed timely, and the Fiscal Assistant to be hired will have a role in the process.

**D. Financial Overdraft**

**During our audit, we noted that a fund related to work performed on a contract has remained in overdraft condition (approximately \$32,000) for several years.**

UCSD policy requires that departments monitor financial balances, and initiate corrective action in a timely manner to eliminate overdrafts for expenditures exceeding the related allocation/budget. Campus policy requires that corrective action plans for overdrafts exceeding \$10,000 or 60 days in duration be documented in writing, and be approved by the cognizant Vice Chancellor or Dean.

We noted one Department fund which has remained in an overdraft of approximately \$32,000 since June, 2006 (approximately 65 months). We have been advised that this overdraft occurred because a promised continuation funding from a Federally-funded private contractor was never received by the University. At the time the deficit occurred, the Department of Mechanical and Aerospace Engineering administered this contract (prior to the formation of the Department of NanoEngineering).

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The Department has indicated that their plan is to cover the fund deficit with differential income generated by service agreements, and that transfers will be made quarterly as funds are available.

**Management Corrective Actions:**

The Department will formally document their deficit correction plan and submit it to the cognizant Vice Chancellor or Dean for approval, as required by campus policy.

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**Audit Results by Business Office Functional Process**  
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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>1</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Express Card Purchases	√	√	√	Reviewed randomly selected transactions; traced to supporting documentation.	No	Needs Improvement	A number of internal control weaknesses were noted in this area (See Report Observation A, page 2)
Timekeeping, Payroll and HR	√	√	√	Reviewed selected timesheets, leave request forms, LASR's, job descriptions, background checks and performance appraisals.	No	Needs Improvement (background checks)	Timekeeping was well documented. However we noted that employee background checks are not being performed as required by policy. (See Report Observation B, page 5)
Operating Ledger Review & Financial Reporting		√	√	Examined selected operating ledgers, overdraft, SAS 112 Controls Documentation, Transaction Sampling, MyFunds and other financial reports.	No	Needs Improvement	In general operating ledger review and financial reporting processes appeared adequate. However transaction sampling was not always timely. (See Report Observation C, page 5).

<sup>1</sup> Scale: Satisfactory - Improvement Suggested - Improvement Needed - Unsatisfactory

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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>1</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Contract & Grant Activity (Post Award Admin.)	√	√	√	Reviewed selected grant proposal documents, award documents, budgets, timesheets, ECERT reports, non-payroll expenses and other grant-related documents.	Yes	Improvement Suggested (for one fund)	Contract and Grant activity generally in compliance with University and sponsor requirements. However one fund has been in overdraft since 2007. (See Report Observation D, page 6).
Transaction Processing - Non-Payroll Expenditures	√	√	√	Reviewed randomly selected transactions, traced to supporting documents.	Yes	Satisfactory	In general transaction processing and documentation for non-payroll expenditures appeared adequate, except as noted below for express card activity.
Travel and Entertainment	√	√	√	Reviewed randomly selected transactions, traced to vouchers (TEV's) & supporting documents.	Yes	Satisfactory	Travel and entertainment expenses are being processed in accordance with University policy.

<sup>1</sup> Scale: Satisfactory - Improvement Suggested - Improvement Needed - Unsatisfactory

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Business Office Process	AMAS Audit Review Procedure				Risk & Controls Balance Reasonable (Yes or No)	Audit Conclusion <sup>1</sup>	Comments
	Analytical Review of Financial Data	Internal Control Questionnaire/ Separation of Duties Matrix	Process Walk-through (Ltd Document Review)	Transaction Testing (Sample Basis)			
Expenditure Transfers	√	√	√	Reviewed transfer explanations for reasonableness.	Yes	Satisfactory	Transfer explanations appear reasonable. No exceptions were noted.
Equipment Management	√	√	√	Reviewed inventory listing and recent equipment acquisitions	Yes	Satisfactory	Equipment inventory was properly maintained.

<sup>1</sup> Scale: Satisfactory - Improvement Suggested - Improvement Needed - Unsatisfactory