September 15, 2011

VICE PROVOST RUMBERGER

Subject: Final Audit Report No. 11A014, MESA Departmental Review

Attached please find the final report for: Audit Project 11A014: MESA Departmental Review. With the issuance of this final report, please destroy any previous draft versions. We very much appreciate the assistance provided to us by your staff during our review. If you should have any questions, please feel free to contact me at 510-987-0482 (e-mail: Susana.Atwood@ucop.edu), or Benjamin Wong at 510-287-3318 (e-mail: Benjamin.Wong@ucop.edu).

Susana Atwood
Audit Director

Attachment

cc: SVP Vacca
    Executive Director Gullatt
    Executive Director Porter
    Director Hicks
    Senior Analyst Carlton
    Analyst Duncan
    Auditor Wong
Executive Summary

Introduction
As part of the 2010-2011 annual audit plan, Internal Audit Services conducted an audit of Mathematics Engineering Science Achievement (MESA) departmental review. The National Science Foundation (NSF) awarded three grants to the University of California (UC) as follows:

<table>
<thead>
<tr>
<th>Grant Number</th>
<th>Amount</th>
<th>Effective</th>
<th>Expiration</th>
<th>Extended</th>
</tr>
</thead>
<tbody>
<tr>
<td>0324218</td>
<td>$1,687,900</td>
<td>09/15/2003</td>
<td>08/31/2007</td>
<td>08/31/2012</td>
</tr>
<tr>
<td>0422499</td>
<td>$836,450</td>
<td>09/15/2004</td>
<td>08/31/2008</td>
<td>08/31/2011</td>
</tr>
<tr>
<td>0631188</td>
<td>$1,750,000</td>
<td>10/01/2006</td>
<td>09/30/2010</td>
<td>09/30/2012</td>
</tr>
</tbody>
</table>

These grants are to support scholarships for academically talented, financially needy students, enabling them to enter the high technology workforce following completion of an associate, baccalaureate, or graduate level degree in computer science, computer technology, engineering, engineering technology, or mathematics. There is a small amount of personnel costs included in the grant budget, however most of the funds are allocated to scholarships.

All of these grants remain active as UC has been filing extensions with NSF. As of August 2011, NSF approved extensions on grant 0324218 and 0631188 but disapproved an extension on grant 0422499. As of July 12, 2011, the remaining balances of these grants were as follows:

<table>
<thead>
<tr>
<th>Grant Number</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>0324218</td>
<td>$165,863</td>
</tr>
<tr>
<td>0422499</td>
<td>$330,126</td>
</tr>
<tr>
<td>0631188</td>
<td>$1,019,283</td>
</tr>
</tbody>
</table>

MESA provides support on these grants, duties include but not limited to, filing annual reports on project outcomes, disbursing funds to campuses, and notifying schools of awards.

Objectives and Scope
The audit objectives were to determine the status of self-identified issues provided by Education Partnerships due to an internal review performed in fall 2010; 1) incomplete paperwork, 2) incomplete history information, 3) incomplete National Science Foundation (NSF) reporting, 4) incomplete and untimely site reporting and invoicing, and 5) undocumented guidelines on exceptions. Additionally, we reviewed procedures in place on administrative processes: payroll/personnel review, record retention, and check collections.

Our review included interviewing staff, reviewing documentation, performing walkthroughs, and analyzing payment data.

Overall Conclusion
MESA filed for extensions on all the grants with NSF and grant 0324218 and 0631188 obtained another year extension to year 2012. Grant 0422499, expiring on August 31, 2011 with remaining balance of $330,126, extension request was rejected by NSF and MESA program is at risk of losing the remaining balance to NSF.

MESA has developed an Access database to track student and school information. This database is a significant improvement on prior tracking methodologies which used multiple spreadsheets with
no links between records. However, this database is still under development and not fully populated; data integrity and security still need to be tested. Additionally, MESA has not collected student internship and employment data which is required by the NSF.

Through our discussions and walkthroughs with MESA staff, we determined procedures are in place on administrative processes.

Management’s Actions
MESA has developed detailed Action Plans that address each of the issues identified in the Opportunities for Improvement section which follows.
Opportunities for Improvement and Action Plans

1. Grant 0422499 extension request rejected by NSF.

MESA filed a one year extension request on grant 0422499 with the remaining balance of $330,126 but NSF rejected this request.

<table>
<thead>
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<td>0422499</td>
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</table>

Per NSF the response to Grant 0422499 extension request: –

"This is the fourth extension request after a 4-year grant (2004 - 2008). Normally NSF will extend a grant a maximum of three years. Although the amount remaining is inconsistent among the four requests ($373K, $127K, $216K, and $330K in 2008-2011 respectively), there is still a large amount of the original award remaining, and the project doesn’t appear to be spending at a rate that will expend the money in any reasonable time."

The chief reason for 2010 and 2011 inconsistent amounts cited above was due to including three or four year commitments to students as if they had already been spent. In addition, when students became ineligible or dropped out of the program, reductions to commitments were not applied. Starting with 2011, MESA is reporting remaining funds to NSF as awarded amount less billed amount.

The University is at risk of losing the remaining balance. Although commitments to students can be funded by the other two grants years; a possible residual effect of losing the funds is that no further competitions for scholarships could be conducted for the third grant year (63118) and the remaining funds in the other two grants would just be enough to pay the active students already in the program.

**Action Plan**

*The MESA Executive Director will file an appeal with the NSF on its decision and follow up with the NSF until a subsequent decision is made.*

**Target Date:** December 2011

2. Incomplete and untimely reporting on student statistical data.

Per NSF Scholarship in Science, Technology, Engineering, and Mathematics awards section vii.c reporting requirement –

“Each CSMES PI is required to complete information about each CSEMS scholar and subsequently update the information reported through the web site during each semester of continued CSEMS support. Instructions will be provided shortly after the award to successful grantees. This information must be provided within 30 days of the beginning of each semester or quarter and includes the following information about each SCEMS scholar: name, permanent address, school address, major, career goals, race/ethnicity (student’s option to report), disabilities (student’s option to report), gender, date of birth, grade point average, participation in an internship (in a CSEMS-related area), and student employment (part-time
or full-time; not necessarily in a CSEMS-related area). Any information that would permit identification of individual respondents will be held in strict confidence."

MESA was delinquent on filing 2005-2007 Computer, Science, Engineering, and Mathematics Scholarship (CSEMS) scholar data with NSF, this backlog on filing has been resolved during the audit. The missing data included 163 students. Since 2008 scholar data has been submitted on a timely basis.

However, no actions have been taken to resolve the issue of incomplete statistical data since. MESA is not collecting or reporting student participation in an internship (in a CSEMS-related area), and student employment (part-time or full-time; not necessarily in a CSEMS-related area). Although campuses are required to file annual reports to MESA, the reports only disclose scholarship recipients – demographic characteristics, continuous enrollment, academic standing and a short comment on the recipient’s progress.

The University’s noncompliance with the reporting requirements on NSF Scholarships in Science, Technology, Engineering and Mathematics programs may result in losing future contracts or the necessity to return funds to the NSF.

**Action Plan**

*The MESA Executive Director will work with campuses to develop a procedure to collect data and report data on current student participation data in internships (in a CSEMS-related area), and on current student employment (not necessarily in a CSEMS-related area). This data will also be included in the Annual report to NSF.*

**Target Date: For both procedure and implementation:** January 2012

3. **MESA Access database integrity and security need to be tested.**

MESA used to keep track of school and student data using multiple spreadsheets with no links between records. An Access database has been developed recently to centrally track MESA data; however, this database is not fully populated and data security and integrity need to be tested.

The University is at risk of compromising student and school data security and integrity.

**Action Plan**

*The Senior Administrative Analyst will continue to develop the MESA Access database and make improvements by: i) further populating data ii) including student employment data tracking, and iii) including campus annual report tracking.*

*Audit Services will review the MESA Access database data for both electronic security and data integrity.*

**Target Date:** January 2012

Per Research Administrative Office Contract and Grant Manual, section 17-312 Retention Period a. Awards –

'Federal and State of California funding agencies usually require records retention for three years (occasionally four years) measured from "final payment" for contracts and measured from "submission of final expenditures report" for grants.'

Our discussion with MESA revealed that the staff was not familiar with the above record retention requirements and consequently records did not have disposition dates. Final payments on grant 032418 and 0422499 will most likely be in FY12, and therefore, corresponding MESA records will need to be kept until FY15. Since the inception of the grants no records have been disposed.

The University can incur fines if they cannot produce required records for the legal number of years of exposure, in contrast maintaining unnecessary records can be costly.

Action Plan
MESA staff is now cognizant of the University's Record Disposition Schedules Manual. This action was completed prior to the issuance of this report.