Agendum
Oakland University
Board of Trustees Formal Session
March 30, 2011

ACCEPTANCE OF GRANTS AND CONTRACTS TO OAKLAND UNIVERSITY FOR THE PERIOD OF OCTOBER 1, 2010 THROUGH DECEMBER 31, 2010

A Recommendation

1. **Division and Department:** Academic Affairs/Office of Grants, Contracts and Sponsored Research

2. **Introduction:** Oakland University contributes to our national agenda as a contributor to the nation's scientific and technological progress, both through the generation of new knowledge and ideas and the education and training of its students. Grants and contracts awarded to Oakland University play a critical role in the advancement of new research findings, and current research trends gives emphasis to inter-disciplinary, technology-driven, and product-oriented team efforts.

The Board of Trustees (Board) has authorized the President, or his or her designee, to receive and acknowledge grants and contracts to the University, but such grants and contracts must be reported to the Board not less often than quarterly for acceptance on behalf of the University.

At this time, we request that the Board accept the grants and contracts reported on the attached Grants and Contracts Report, Attachment A, for the period October 1, 2010 through December 31, 2010.

3. **Previous Board Action:** The Board accepts grants and contracts to Oakland University on a regular basis at its Formal Sessions.

4. **Budget Implications:** Grants and contracts contribute to the University through the recovery of direct and indirect expense incurred in support of research projects.

5. **Educational Implications**: Grants and contracts enhance the training and education of students.

6. **Personnel Implications:** Grants and contracts awards may provide salary support for faculty, post-doctoral fellows, undergraduate and graduate students, technicians, lab managers, and other personnel, as required by the funded research project or program.

7. **University Reviews/Approvals:** All grants and contracts are reviewed by the Office of Grants, Contracts and Sponsored Research prior to submission to the Board to ensure compliance with federal and state laws and regulations and University policies and procedures, when applicable, and with assistance from the Office of Legal Affairs when requested.

8. **Recommendation:**

RESOLVED, that the Board of Trustees accept grants and contracts to Oakland University identified in the attached Grants and Contracts Report, Attachment A, for the period of October 1, 2010 through December 31, 2010.

9. **Attachments:** A. Grants and Contracts Report.

Submitted to the President
on 3/4, 2011 by

Virinder K. Moudgil
Senior Vice President for
Academic Affairs and Provost

Recommended on 3/9, 2011
to the Board for approval by

Gary D. Russi
President

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Michael Polis Department of Engineering and Computer Science	Michigan Economic Development Corporation	***Economic Development Job Training.*** *The aim of this project is to train Denso International North America employees as part of a worker retraining and job retention initiative of the Michigan Economic Development Corporation.*	$ 100,000	$ 100,000
Ka C. Cheok Department of Electrical and Computer Engineering	U.S. Army	***2011 Annual Intelligent Ground Vehicle Competition (IGVC) Organization and On-site Host.*** *This competition is sponsored by the U.S. Army and is an organized robotics competition at the university and high school levels to advance the Joint Center for Robotics (JCR) education outreach mission and objectives.*	$ 98,010	$ 98,010
Gary Barber Department of Mechanical Engineering	Mississippi State University (prime awardee of U.S. Army TACOM)	***Automotive Tribology Center.*** *The Automotive Tribology Center is an academic research unit within the Mechanical Engineering department at OU and the center will perform fundamental and applied research that lowers frictional energy losses and enhances reliability and durability of automotive components.*	$ 1,426,933	$ 1,426,933
Krzystof Kobus Department of Mechanical Engineering	U.S. Department of Energy	***Alternative Energy Education.*** *The objective of this project is to establish significant alternative energy education through living laboratory energy infrastructure.*	$ 500,000	$ 500,000
Subramaniam Ganesan Department of Electrical and Computer Engineering	Harley Davidson Motor Company	***CAN Interface Modeling Software.*** *This research work involves modeling a vehicle bus transceiver that includes effects on CAN Transmitter/Receiver performance.*	$ 6,016	$ 6,016
Zissimos Mourelatos Department of Mechanical Engineering	University of Michigan (prime awardee of U.S. Army TACOM)	***Time-Variant Reliability-Based Optimization for Lifecycle Cost Reduction.*** *The objective of this project is to develop a new reliability-based, time-variant system optimization method, in order to reduce lifecycle and warranty cost. Applying developed methodologies to powertrain and vehicle design.*	$ 75,000	$ 497,280

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Getnet Bekele Department of History	Michigan State University (prime awardee of U.S. Department of Education)	***African Oral Narratives.*** *The goal of this project is to make available first-hand farmers' experiences in agricultural development on the web to students, scholars, INGOs, and policy makers around the world. Oftentimes policy makers and non-government organizations make agricultural development policies with little or no contact with farmers. This project seeks to bridge that gap.*	$ 5,749	$ 16,057
Gopalan Srinivasan Department of Physics	Office of Naval Research	***Ferrite-Ferroelectric Heteroepitaxial Structures and Frequency Agile Multiferroic RF Components.*** *This objective is growth of heterostructure composites and studies on high frequency excitations. Such composites have the potential to be useful for radio frequency signal processing.*	$ 20,000	$ 270,000
Osamah Rawashdeh Department of Electrical and Computer Engineering	General Motors Corporation	***Design and Implementation of a Prototyping Platform for Automotive Instrument Clusters.*** *The goal of this project is to develop a reconfigurable prototyping HW/SW environment to allow for the development and experimentation with in-vehicle driver interfaces.*	$ 55,958	$ 55,958
Xiangqun Zeng Department of Chemistry	National Institute for Occupational Safety and Health	***Autonomous Electrochemical Gas Sensor Detection Microsystem for Mine Safety.*** *The objective of this project is to develop new, miniaturized technology for sensing multiple gases that is capable of strategic dispersion throughout an underground coal mine.*	$ 161,286	$ 161,286
Scott Tiegs Department of Biological Sciences	Fisheries and Oceans Canada	***Determining the Detectability of Round Gobies Using Multiple Gears in Riverine Ecosystems.*** *The goal of this project is to improve field methods for detecting the presence of an invasive fish, the round goby, in streams and rivers.*	$ 8,200	$ 8,200
Lorenzo Smith Department of Mechanical Engineering	Chrysler Group	***Part B: Skid Line Surface Distortion Analysis for Aluminum Alloy Sheet Metal.*** *The objective of this work is to use the SBDS to study skid line formations in an aluminum alloy.*	$ 3,000	$ 3,000

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Lorenzo Smith Department of Mechanical Engineering	Ford Motor Company	***Part C: Skid Line Surface Distortion Analysis for Aluminum Alloy Sheet Metal.*** *The objective of this work is to design and fabricate a new SBDS to study skid line formations in several aluminum alloys.*	$ 5,000	$ 5,000
Julie Ricks-Doneen Lowry Early Childhood Center	U.S. Department of Education	***Child Care Access Means Parents in School.*** *This project will provide Pell-eligible undergraduate student-parents financial assistance with their Lowry enrolled child's tuition.*	$ 54,121	$ 54,121
Sayed Nassar Department of Mechanical Engineering	Mississippi State University (prime awardee of U.S. Army TACOM)	***Isolated Floor System for US Army Ground Vehicles.*** *The objective of this project is to develop and demonstrate an isolated Floor System to protect cabin crew of US Army ground vehicles against the impact force from IED explosions.*	$ 929,858	$ 929,858
Reginald McCloud Pre-College Programs	Michigan Department of Labor and Economic Growth	***GEAR UP.*** *The GEAR UP College Day Program is designed to provide academic and social support for students currently moving to the eleventh grade with support continuing through their senior year of high school. As a result of their active participation, students will be adequately prepared for college.*	$ 47,840	$ 47,840
Reginald McCloud Pre-College Programs	Detroit Area Pre-College Engineering Program (DAPCEP)	***Detroit Area Pre-College Engineering Program (DAPCEP).*** *The objective of this project is to give underrepresented students the interest and preparation needed to succeed in a university-level science or engineering curriculum.*	$ 7,087	$ 7,087
Reginald McCloud Pre-College Programs	Detroit Area Pre-College Engineering Program (DAPCEP-PURSE)	***Detroit Area Pre-College Engineering Program (DAPCEP-PURSE).*** *The Promote Underrepresented Girls Involvement in Research, Science, and Energy (PURSE) is a project to get high school girls to participate in science and engineering activities that teach concepts related to the production and storage of energy.*	$ 18,000	$ 18,000

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Gwendolyn McMillon Department of Reading and Language Arts	Michigan Department of Education (prime awardee of U.S. Department of Education)	***Whom Are We Serving: Utilizing Students' Out-of-School Experiences to Improve In-School Teaching and Learning.*** *This project will provide urban elementary teachers opportunities to reflect on classroom practice, acquire in-depth knowledge about their students, learn about research-based teaching techniques specifically designed for urban learners, and implement data-driven instruction that matches their students' specific literacy needs.*	$ 200,000	$ 200,000
Arthur Bull Department of Chemistry	National Science Foundation	***Acquisition of an MS Instrument.*** *The objective of this project is to purchase an ESi/ APCI LC/MS instrument and thus upgrade our shared user instrument capabilities.*	$ 199,000	$ 199,000
Lorenzo Smith Department of Mechanical Engineering	Ford Motor Company	***Process Development of Aluminum Tube Bending and Hydroforming.*** *The goal of this project is to develop standard finite element modeling procedures for tube hydroforming processes.*	$ 56,262	$ 56,262
Lorenzo Smith Department of Mechanical Engineering	General Motors Corporation	***Skid Line Surface Distortion Analysis for Aluminum Alloy Sheet Metal.*** *The objective of this work is to use the SBDS to study skid line formations in an aluminum alloy.*	$ 5,000	$ 5,000
Lorenzo Smith Department of Mechanical Engineering	Ford Motor Company	***Development Technology in Sharp Flanging and Electrohydraulic Forming.*** *The purpose of this work is to verify and further develop a technology in the area of sharp flanging and electrohydraulic forming.*	$ 120,000	$ 662,089
Omar Brown-El Center for Multicultural Initiatives	Michigan Department of Labor and Economic Growth	***Students First.*** *The goal of this program is to provide "at-risk students" with intrusive support services to improve academic performance, first-year retention and first-year GPA.*	$ 57,000	$ 57,000
Gopalan Srinivasan Department of Physics	United States Army	***Research Experience for High School Students: High Frequency Materials and Measurement Techniques.*** *The objective of this project is to provide research experience for high school students.*	$ 86,700	$ 397,955

Principal Investigator	Awarding Agency	Title and Project Abstract	Award Amount	Total Award All Years
Zissimos Mourelatos Department of Mechanical Engineering	Mississippi State University (prime awardee of U.S. Army TACOM)	***Fleet Maintenance Simulation for Unmanned Ground Vehicles.*** *The objective of this project is to develop algorithms for simulation of the maintenance actions required for a fleet of unmanned ground vehicles in order to predict reliability, availability, and maintainability.*	$ 151,799	$ 151,799
Hoda S. Abdel-Aty-Zohdy Department of Electrical and Computer Engineering	RNET Technologies, Inc. (prime awardee of U.S. Air Force Research Lab)	***Spiking Neural Networks System Architecture for Mimo-Radar Classifications.*** *Oakland University will examine Synthetic Aperture Radar (SAR) processing using spiking neural networks to provide "new" fusion-based algorithms for high resolution SAR image which will facilitate radar fusion visualization.*	$ 70,200	$ 70,200
Darrin Hanna Department of Electrical and Computer Engineering	Intrepid Control Systems	***Vehicle Network Embedded Systems Laboratory.*** *The goal of this project is to research and develop new embedded tools and methodologies for expediting current R&D processes involving vehicular networks.*	$ 276,594	$ 276,594
		Total	**$ 4,744,613**	**$ 6,280,545**