

Line	Item	Change from budget estimate
1	University Research Initiatives	
	Cell-Based Sensors for Chemical Threats	1,500
	Low Acoustic and Thermal Signature Battlefield Power Source	2,500
	University Research Initiatives	10,000
2	In-House Laboratory Independent Research	
	Alternative Futures at the Range Complex level for the Southwest U.S	1,000
3	Defense Research Sciences .	
	Evaluating ELF Signals in Maritime Environment	1,700
	Navy Science and Technology Outreach	1,000
	ONAMI Nano-electronics and Nanometrology Initiative	2,500
	Texas Microfactory	3,500
	Rotational Molded Double Wall for Un-manned Patrol Boat	3,000
4	Power Projection Applied Research	
	Advanced Propulsion for Gun Launched Projectiles and Missiles	1,000
	Clustered Millimeter Wave Imaging Sensors & Manufacturing	2,000
	Combustion Light Gas Gun Projectile	4,000
	High Energy Conventional Energetics	5,000
	High Performance Alloy Materials Steel Castings	2,000
	Unmanned Aerial Vehicle Fuel Cell Power Source	2,000
5	Force Protection Applied Research	
	Advanced Simulation Tools for Aircraft Structures	2,000
	Alternative Energy Research	20,000
	Critical Composite Technologies for SOF Medium Range Craft	1,000
	Force Protection Applied Research	2,500
	Lithium-Ion Cell Development	3,000
	Magnetic Refrigeration Technology	4,000
	PMRF Force Protection Lab	2,500
	Shipboard Production of Synthetic Logistics and Aviation Fuel	2,000
	Undersea Perimeter Security Integrated Defense Environment	3,500
6	Marine Corps Landing Force Technology	
	Survivability Program	1,500
	Warfighter Rapid Awareness Processing Technology for Distributed Operations	3,000
7	Materials, Electronics and Computer Technology	
	Infrared Materials Center	2,000
8	Common Picture Applied Research	
	All Weather Sense and Avoid for UAVs	3,000
	M2C2	4,000
	Theater Undersea Warfare Initiative (TUSW)	4,000
9	Warfighter Sustainment Applied Research	
	Advanced Fouling and Corrosion Control Coatings	2,000
	Amelioration of Military Hearing Loss	1,000
	Biosensors for Defense Applications	2,500
	Digital Directed Manufacturing Project	1,600
	Miniaturization, Systemization of Semiconducting Metal Oxide	1,000
	Nanotechnology Research	5,000
10	RF Systems Applied Research	
	Gallium Nitride RF Power Technology	2,500

Line	Item	Change from budget estimate
	National Initiatives for Applications of Multifunctional Materials	2,000
	Silicon Carbide MOSFETs for Electric Power Systems	1,500
13	Undersea Warfare Applied Research	
	Gafenol Energy Harvesting	2,000
	High Power Lithium Battery	1,000
14	Mine and Expeditionary Warfare Applied Research	
	Electromagnetic Signature Assessment System Using Multiple Autonomous Underwater Vehicles	2,500
	NMSU Water Security Program	1,000
	Virtual Onboard Analyst (VIRONA) for Multi-Sensor Mine Detection	1,000
15	Power Projection Advanced Technology	
	Advanced Motor-Propulsor Development and Testing	5,000
	Autonomous Unmanned Surface Vessel (AUSV1)	1,000
	Excalibur	1,000
	Expeditionary Craft	20,000
	Free Electron Laser Naval Applications	2,000
	Information Sharing for ISRTE	1,000
	Long Wavelength Array	3,000
	Smart Instrument Development for Magdalena Ridge Observatory	6,500
16	Force Protection Advanced Technology	
	Accelerating Fuel Cells Manufacturability	3,000
	Advanced Volume Sensor System	2,000
	Electrochemical Field-Deployable System for Potable Water Generation	3,000
	Formable Textile for Complex Shaped Aerospace Composites	2,000
	Future Fuel Non-Tactical Vehicle Initiative	2,000
	Manufacturing and Repair Cell	4,000
	Maritime Mobile Force Protection Program	2,000
	Secure Infrastructure Technology Laboratory	4,000
	Single Generator Operations Lithium Ion Battery	5,000
	Wide-Band Gap Semiconductor Materials	2,000
18	Warfighter Sustainment Advanced Technology	
	Defense Modernization and Sustainment Initiative	2,000
	Protective Apparel Technology Systems	1,000
19	RF Systems Advanced Technology	
	Pacific Airborne Surveillance and Testing	16,000
20	USMC Advanced Technology Demonstration (ATD)	
	MEMS Microdetonator Packaging Technology	3,000
	Marine Air-Ground Task Force Situational Awareness	1,000
23	Warfighter Protection Advanced Technology	
	Integrated Warfighter Biodefense Program	3,000
	Massive Tissue Injury/Amputation Repair with Composite Tissue Transplantation	3,000
	Neural Control of External Devices (artificial limb movement)	1,000
24	Undersea Warfare Advanced Technology	
	Deep Water Acoustic Detection System	3,200
27	Air/Ocean Tactical Applications	
	Semi-Submersible UUV	1,000
28	Aviation Survivability	
	Intelligence Gathering Uninhabited System	2,000

Line	Item	Change from budget estimate
	Unmanned Aircraft Systems Optimization Technologies	3,500
34	Surface Ship Torpedo Defense	
	Sensor Arrays for Multiple Applications	1,500
36	Shipboard System Component Development	
	Advanced Fluid Controls for Shipboard Applications	3,000
	Advanced Steam Turbine	5,000
	DDG 51 Homopolar Hybrid Drive	6,100
	MTTC/1PI and National Surface Treatment Center	4,000
	Power Conversion Equipment for High Density Power Generation	1,000
	Propulsor Manufacturing Technology	3,000
	Smart Valve	3,000
41	Surface ASW	
	Improved Surface Vessel Torpedo Launcher	2,000
43	Advanced Submarine System Development	
	CISRT Enabling Materials Technology	3,000
	Controllable Shock Absorber for Advanced Submarines	1,800
	Organic Submarine Airborne ISRT Demonstration	3,500
	Submarine Artificial Intelligence-Based Combat System Kernel	3,000
	Twinline Thin Line Submarine Towed Array	4,000
	Undersea Launched Missile Study	5,000
44	Submarine Tactical Warfare Systems	
	Submarine Targeting Agile Array with Rapid Zooming	1,650
45	Ship Concept Advanced Design -..	
	Autonomous Maritime Navigation Program	6,000
	Lox-Signature Modular Weapon Platform	3,000
46	Ship Preliminary Design & Feasibility Studies	
	Common Composite Island Concept	2,700
	Support for Naval Ship Hydrodynamic Facilities	5,000
50	Littoral Combat Ship (LCS)	
	New Payloads and Sensors Unmanned Surface Vehicle System	2,000
53	Marine Corps Assault Vehicles	
	Intelligent Machining of Advanced Defense Materials	2,000
55	Marine Corps Ground Combat/Support System	
	Anti-Sniper Infrared Targeting System	5,000
	Urban Operations Environmental Lab	4,000
63	Navy Logistic Productivity	
	Highly Integrated Optical Interconnects	2,000
	Multi-Colored Infrared Sensors	4,000
100	SC 21 Total Ship System Engineering	
	Permanent Magnet Motor	9,000
	Advanced Wireless Encryption Module	3,000
	Bio/Nano-MEMS for Defense Applications	4,000
108	SSN-688 and Trident Modernization	
	Advanced Intercept Ranging Systems (AIRS)	4,000
	Improved Submarine Thin Line Towed Array Handler	4,000
112	Combat Information Center Conversion	
	Environmentally Sealed Ruggedized Large Scale Display for Tactical Operations Centers	2,000

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113	New Design SSN	
	Combat Control for Distributed Netted Systems	2,000
	Submarine Electronic Chart Updates	3,000
115	Submarine Tactical Warfare System	
	Automated Submarine Command and Control Center	2,000
126	Ship Self Defense (Detect & Control)	
	Expeditionary Swimmer Defense System	2,000
127	Ship Self Defense (Engage: Hard Kill)	
	Next Generation Phalanx	8,500
128	Ship Self Defense (Engage: Soft Kill/EW)	
	Advanced Radar Absorbing Tiles for Surface Ships	2,000
130	Medical Development	
	Granular Chitosan Clotting Agent for Anti-Coagulated Hypothermic Blood	1,000
	Multivalent Dengue Vaccine Program	3,000
	Next Generation Networking Electronic Medical Records Project	4,900
	Phase 1 Clinical Trials for Infusible Hemostatic Agent	4,000
133	Joint Strike Fighter (JSF)	
	Competitive Engine Program	240,000
136	Information Technology Development	
	Condition Based Maintenance Enabling Technologies	3,000
	Digitization of NCIS Investigative Files	8,000
	Integration of Logistics Info for Knowledge Projection and Readiness	2,000
	SPAWAR Systems Center, Information Technology Center	10,000
143	Major T&E Investment	
	Network Expansion & Integration of Navy/NASA RDT&E Ranges	5,000
148	Technical Information Services	
	HTDV	10,000
	Naval Aviation Technology Exploration Initiative	1,000
	Pacific-Based Joint Info Tech Center	7,500
158	Marine Corps Program Wide Support	
	Individual Chemical Alert System	1,000
165	Strategic Sub & Weapons System Support	
	Advanced Linear Accelerator Facility	3,000
170	F/A 18 Squadrons	
	F/A 18 Tactical Operational Flight Trainers Fidelity Upgrade	2,000
	NAVAIR CPI Tech Manual Conversion and Support	2,000
174	Integrated Surveillance System	
	Distributed Maritime Surveillance System	2,000
181	Surface ASW Combat System Integration	
	Advanced Composite Materials for Acoustic Windows Applications	8,000
183	Aviation Improvements	
	Real-Time Weight and Balance Measurement System for C-130s	4,000
	Arc Fault Circuit Breaker with Arc Location System	1,000
	Rapid Repair UV Curable Structural Adhesives	4,000
	Structural Life Tracking	2,000
	F/A-18 Avionics Ground Support System	2,000
	Wireless Sensors for Navy Aircraft	2,000

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186	Marine Corps Communications Systems	
	Performance Enhancements for Information Assurance and Information Systems	6,100
187	Marine Corps Ground Combat/Supporting Arms Systems	
	Mobile Oxygen, Ventilation, and External Suction (MOVES)	2,000
192	Maritime Intelligence	
	Secure Data Sharing for Digital Radiographic Imaging	1,500
	Surf Eagle Open Source Environmental Intelligence	4,500
195	Satellite Communications (SPACE)	
	IPv6	1,000
196	Information Systems Security Program	
	Universal Description Discovery and Integration	3,500
203	Tactical Unmanned Aerial Vehicles	
	Advanced Airship Flying Laboratory	2,000
	Skybus 80k and 130k LTA-UAS Multirole Technologies	2,000
205	Airborne Reconnaissance Systems	
	Fusion, Exploitation, Algorithm, Targeting, High-Altitude Reconnaissance (FEATHAR)	5,000
206	Manned Reconnaissance Systems	
	Collective Aperture Multi-Band Sensor System	1,500
213	Maritime Technology (MARITECH)	
	National Shipbuilding Research Program	15,000
	Navy Automatic Identification Technology (AID) Engineering Support	1,000
	Total	744,750