STATE OF CALIFORNIA
ETP
EMPLOYMENT TRAINING PANEL

RETRAINEE - JOB CREATION
Training Proposal for:

International Business Machines Corporation
Agreement Number: ET16-0273

Panel Meeting of: December 4, 2015

ETP Regional Office: San Francisco Bay Area **Analyst:** D. Woodside

PROJECT PROFILE

Contract Attributes:	Retrainee Job Creation Initiative Veterans Priority Rate	Industry Sector(s):	Technology/IT Manufacturing Priority Industry: ☒ Yes ☐ No
Counties Served:	Contra Costa, Sacramento, San Mateo, Santa Clara, San Francisco, Los Angeles, Orange, San Diego	Repeat Contractor:	☒ Yes ☐ No
Union(s):	☐ Yes ☒ No		

Number of Employees in:	CA: 8,884	U.S.: 75,000	Worldwide: 300,000
Turnover Rate:	7%		
Managers/Supervisors: (% of total trainees)	10%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	Total ETP Funding
$388,378		$0	$0		$388,378

In-Kind Contribution:	100% of Total ETP Funding Required	$1,329,000

TRAINING PLAN TABLE

Job No.	Job Description	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	Retrainee Priority Rate	Cont. Imp., Business Skills, Computer Skills, Mgmnt. Skills	715	8-200	0-200	$414	$29.00
				Weighted Avg: 23			
2	Retrainee Job Creation Initiative Priority Rate	Cont. Imp., Business Skills, Computer Skills, Mgmnt. Skills	192	8-200	0-200	$460	$29.00
				Weighted Avg: 23			
3	Retrainee Job Creation Initiative Veterans Priority Rate	Cont. Imp., Business Skills, Computer Skills, Mgmnt. Skills	8	8-200	0-200	$506	$29.00
				Weighted Avg: 23			

Minimum Hourly Wage by County: Job Number 1: $16.44 in Contra Costa, San Mateo, Santa Clara, San Francisco; $16.02 in Orange; $15.97 in Los Angeles; $15.75 in Sacramento; $15.93 in San Diego. **Job Numbers 2 & 3 (Job Creation and Veterans)**: $13.70 in Contra Costa, San Mateo, Santa Clara, San Francisco; $13.35 in Orange; $13.31 in Los Angeles; $13.13 in Sacramento; and $13.28 in San Diego.

Health Benefits: ☒ Yes ☐ No   This is employer share of cost for healthcare premiums – medical, dental, vision.

Used to meet the Post-Retention Wage?: ☐ Yes ☒ No ☐ Maybe

Although employer provides health benefits, they are not being used to meet the Post-Retention Wage.

Wage Range by Occupation (For all Job Numbers)		
Occupation Titles	Wage Range	Estimated # of Trainees
IT Architect I		50
IT Architect II		100
IT Specialist I		75
IT Specialist II		125
Manager/Supervisor I		25
Manager/Supervisor II		68
Project Manager I		90
Project Manager II		93
Software Engineer I		100
Software Engineer II		50
Software Engineer III		39
Technician I		50
Technician II		50

INTRODUCTION

Founded in 1911, International Business Machines Corporation (IBM) (www.ibm.com) provides Information Technology (IT) products and services worldwide. It creates, designs, markets, manufactures and sells advanced technologies including computer systems, software, networking systems, storage devices, cloud computing, data analysis, data warehousing and Web content delivery to a global customer base in a myriad of industries.

The Company reports that 90% of the world's largest banks, 9 of the top 10 oil and gas companies, 40 of the 50 major retailers, and 92 of the top 100 healthcare organizations use IBM systems. IBM's mainframes alone process 75% of the world's business data.

Training under this proposal will be for employees of IBM's Global Business Services Division. This Division provides more than systems hardware and equipment. It assists customers solve complex business and technical issues by providing consulting, process design, systems integration, and software application design and management to commercial and public sector organizations worldwide.

IBM maintains a strong presence in California, particularly in the San Francisco Bay Area. IBM looks to its Northern California research and development locations for highly sophisticated, industry-leading research and product development work. Most of this activity now occurs at IBM's two primary San Jose locations: the Silicon Valley Laboratory and the Almaden Research Center. IBM's research explores the boundaries of science and technology from nanotechnology to data analytics, secure clouds, and future systems such as IBM Watson, a "cognitive" learning system. Watson represents an entirely new model of computing: it understands all types of data, it isn't programmed, it learns.

IBM has the world's largest mathematics department of any public company, enabling IBM to create unique analytic solutions and actively engage with clients on their toughest challenges. In addition to its research facilities, IBM also has a number of field offices throughout California. Employees from all IBM locations in San Jose, Burlingame, Cupertino, Sacramento, San Francisco, Los Angeles, San Diego, Irvine, Costa Mesa, Glendale, and San Ramon will be trained under this proposal.

Retrainee - Job Creation

The Panel offers incentives to companies that commit to hiring new employees. Training for newly-hired employees will be reimbursed at a higher rate and trainees will be subject to a lower post-retention wage. However, IBM is not asking for a reduced wage, as wages for all trainees in this proposal exceed the standard ETP Minimum Wage.

In September of 2015, IBM announced the creation of a new Watson location in San Francisco where the Company plans to hire over 200 new employees. IBM has signed a 10-year lease for 84,000 square feet of space with a long-term capacity for 500 employees in San Francisco.

In this proposal, IBMC has committed to hiring a total of 200 new employees over the next two years. This growth includes the hiring of eight Veterans (Job Number 3). The date-of-hire for all trainees will be within the three-month period before contract approval or within the term-of-contract.

Veterans

The Panel has established a higher reimbursement rate ($22 per hour) and other incentives for training California veterans. IBM has a robust outreach program, including recruitment and mentoring, for Veterans and disabled Veterans. To assist its efforts, IBM partners with a non-profit organization specializing in Veterans recruitment. In this proposal, IBM has committed to hiring and training 8 Veterans in Job Number 3.

Nanotechnology

In addition to cognitive computing, the IBM's SyNAPSE chip, introduced on August 7, 2014, has the potential to spur innovation around an entirely new class of applications with sensory capabilities at incredibly low power levels. This is enabled by a new technology design inspired by the human brain. IBM built a new chip with a brain-inspired computer architecture powered by one million neurons and 256 million synapses. It is the largest chip IBM has ever built at 5.4 billion transistors. Yet, it consumes significantly less energy than traditional chips. As part of a complete cognitive hardware and software ecosystem, this technology opens new computing frontiers for distributed sensor and supercomputing applications.

Training identified in this proposal will focus on new IBM employees working in California and the retraining of California employees impacted by the new technologies described above and throughout this proposal. ETP funding will allow workers to improve their skills sets and learn the newest technologies related to the cloud, analytics, mobile applications, Social and Security software, and the Internet of Things. The Internet of Things represents an evolution in which objects are capable of interacting with other objects. The Internet of Things helps enable proactive data access from any connected device.

PROJECT DETAILS

IBM is requesting the Panel's assistance to provide classroom/laboratory, E-learning, and computer-based training (CBT) training hours to all occupations. IBM will use Virtual or E-learning class/lab training as a primary training methodology. IBM uses its synchronous real-time technology to host training sessions over the internet with live instruction. These classes allow trainees to gain skills on an as-needed basis without traveling. This training is identical to classroom training in every manner except that the class is not physically located in a traditional classroom.

Note that each "Type of Training" section in Exhibit B Curriculum reflects generic course titles under an IBM title called a "Portfolio" such as "Employee Development" or "Job Family Skills Development" which may contain hundreds of course titles. Staff has reviewed the spreadsheets of courses by Portfolio provided to date and will continue to monitor throughout the Agreement the courses provided, whether through traditional class/lab, E-Learning, or CBT, to ensure that each specific course is eligible for ETP funding.

Business Skills (28%): Training will be provided to all occupations and will be customized to each occupation and employee. Software Engineers will receive courses in product and process excellence to design and develop software systems. IT Architects will take courses in enterprise initiatives to develop new applications for clients. Managers and Supervisors will learn about new products and branding. Project Managers will receive business courses to track an array of activities, including initializing and planning projects, developing project cost structure, tracking and reporting project deliverables, managing risk, managing contracts and/or deliverables associated with a contract, and applying project management processes and tools.

Computer Skills (50%): Trainees in all occupations will receive training tailored to their job assignments. A major focus of this training will be Cloud, Analytics, Mobile, Social, Security Technologies and Internet of Things. These are IT technologies embedded in infrastructure, cloud computing, data, networks, communication, and software across all industries. The Internet of Things deals with the connectivity and communication between devices through the Internet. For example, new household appliances have features that allow communication within that household so functions can be turned on/off; a status provided; and maintenance issues communicated. In order for IoT to work, employees must be skilled in related Internet, network, software, security, and mobile applications development to make this technology function. So, if you extrapolate this one example to an infinite array of functions, you can imagine the size and scope of this retraining effort.

Software Engineers need to design and develop products, processes, software systems, and/or scientific applications, which require the use of broad software engineering knowledge and experience to develop solutions for complex systems. Software Engineers will focus their training on learning new software technology such as Cloud Computing applications and Watson Technologies. Project Managers not only need project management training but also specific technology training in the IBM business unit where they work. If the project manager works in a business unit that is integrating newly acquired technology, then he or she will receive training to understand the technology in courses from Global Sales Learning and Service Offerings/Specialty Specific Portfolios. IT Specialists will receive training to identify project requirements and develop solution delivery strategies. Since such solutions may include vendors and subcontractors, employees may receive coursework in the Independent Hardware/Software Vendor and Industry Solutions Portfolio of courses.

Continuous Improvement Skills (19%): Trainees from all occupations will take courses in Delivery Excellence in order to ensure quality control and best in class delivery systems. Courses include: effective practices for quality analysis, measuring software quality, team leadership skills for testers, problem-solving, decision-making and change management.

Management Skills (3%): Managers and Supervisors will take courses from the Leadership portfolio of courses. A major focus of this training is on how to organize and facilitate teams to meet the critical needs of customers globally and across industries.

Computer-Based Training

The majority of the training provided under this Agreement is technical skills training in high level programming languages; implementing and integrating newly acquired technologies; and training in developing solutions for clients. IBM offers and delivers over 5,000 CBT courses of instruction through its LMS system. IBM develops all its CBT courses internally. Factors such as learning objectives, instructional and assessment activities to measure content, knowledge and skills, as well as beta testing (a high level computer software testing method to ensure accuracy) are all used to determine the "average hours" of a CBT course, which is documented in IBM's LMS system. On average, IBM estimates that trainees will receive 25% of training hours via CBT. However, IBM requests to provide up to 100% of its ETP training via CBT per – trainee, instead of the standard 50% cap. IBM anticipates the higher cap will be needed for some trainees across all occupations. (See CBT course hours at Exhibit B).

Each CBT course is evaluated during the course of instruction through a series of assessments that may include questions, tests, and knowledge reviews. Upon completion, a certificate is issued to the trainee and confirms skills competency in the area covered by the training.

Out-of-State Training

IBM reports that approximately 95 trainees will require 24-40 specialized classroom/lab training which will be provided at IBM facilities out-of-state, not to exceed a maximum of 10% of the total planned training hours for the entire project. All out-of-state training will be delivered at IBM facilities by IBM employees to trainees across all occupations in highly technical training courses. IBM must satisfy ETP requirements for attendance and documentation of training. All training must be in compliance with the ETP 1:20 trainer-to-trainee ratio.

Commitment to Training

The Company's statewide training expenditures in California are in excess of $8,000,000 annually. IBM currently funds all training in OSHA and FDA-mandated safety regulations; new hire orientation and rudimentary job skills; sexual harassment prevention; desktop training in Microsoft Word, Excel, and PowerPoint; basic software training; and IBM values and executive development training.

ETP funds will not displace IBM's existing financial commitment to training. Safety training is provided in accordance with all pertinent requirements under state and federal law.

Recordkeeping

Staff has reviewed and approved the use of a Learning Management System for recordkeeping.

Substantial Contribution

Because IBM has not earned more than $250,000 at any one location in the previous five years, there is no substantial contribution being applied to this project. For information purposes, note that IBM only earned a total of $378,944 in Panel funds statewide either through direct ETP contracts or under a MEC contract across multiple locations during the previous five years.

RECOMMENDATION

Staff recommends approval of this proposal including the funding of out-of-state training and the increase in the percentage of CBT from 50% to 100%.

PRIOR PROJECTS

The following table summarizes performance by IBM under an ETP Agreement completed within the last five years:

Agreement No.	Location (City)	Term	Approved Amount	Payment Earned $ %
ET12-0183	Statewide	11/28/11–11/27/13	$424,575	$142,900 (34%)
ET10-0166	Statewide	10/05/09-10/04/11	$235,125	$235,125 (100%)

ET12-0183: The low performance under IBM's most recent Agreement was an anomaly since under the two prior Agreements, IBM earned 100% (ET10-0166) and 83% (ET07-0188). Under ET12-0183, IBM did not include its San Jose site which is the work location of over 3,000 IBM employees. The facility in San Jose was not included in order to focus training at the regional sites in California that received only a small portion of training under previous ETP contracts. IBM believed that it would be good to step back

from the San Jose site and not accept ETP training funds due to previous funding requests. During the calendar year 2012, IBM reports that over 4,000 hours of training were actually completed at the San Jose site at a cost of over $300,000. Had the San Jose site been included in the ET12-0183 Agreement, IBM would have met all the training and financial objectives under ET12-0183.

For its new proposal, IBM is including all sites in California including San Jose. The workforce currently numbers over 8,000 employees statewide and continues to grow. Because of IBM's past success in meeting its training objectives under previous ETP Agreements, the inclusion of all training technologies including E-learning and CBT, the inclusion of all training sites, the expansion of its facilities and new employees to be hired in San Francisco, and the cutting edge technology being developed by and impacting its California workers, staff recommends funding at a higher amount ($388,378) than the previous earnings of $142,900.

DEVELOPMENT SERVICES

California Manufacturers & Technology Association (CMTA) of Sacramento provided application development services for a flat fee of $7,500.

ADMINISTRATIVE SERVICES

CMTA will perform administrative services for an amount not to exceed 12% of payment earned.

TRAINING VENDORS

To Be Determined

Exhibit B: Menu Curriculum

Class/Lab/E-Learning Hours
8-200

Trainees may receive any of the following:

BUSINESS SKILLS
- Product/Brand Specific Training
- Employee Development
- Enterprise Initiatives/Strategies/Tools
- Product and Process Excellence

COMPUTER SKILLS
- Cloud, Analytics, Mobile, Social, Security Technologies
- Internet of Things

CONTINUOUS IMPROVEMENT
- Job Family Skills Development
- Delivery Excellence

MANAGEMENT SKILLS (MANAGERS/SUPERVISORS ONLY)
- Leadership

Computer-Based Training
0 - 200

COMPUTER SKILLS
- Advanced WebSphere (10 – 40 hours)
- Custom Software Development (20-40 hours)
- Database and Transaction Systems (8-40 hours)
- End User (24 hours)
- Linux (25-40 hours)
- Storage Systems (8-40)

CONTINUOUS IMPROVEMENT
- Managing Teams (24 hours)
- Executing and Controlling the Project (36 hours)
- Cost Estimating (16 hours)

An Excel spreadsheet will be provided to ETP with a breakdown of each topic listed above and all class/lab/E-learning and CBT courses submitted for ETP funding prior to upload into the Panel's Tracking System. The CBT list shall include standard times per module.

> Note: Reimbursement for all retrainees is capped at 200 total training hours per trainee, regardless of training delivery method. CBT will be capped at 100% of total training hours per-trainee.