A. Difference/Relation of HSEP to MSEP

HSEP and MSEP are two independent programs that are complementary to each other. MSEP was established in 2013 and was provided a 1-million peso seed-money by the UPLB distinctive excellence fund. It has been instrumental in numerous trainings and research and extension activities held by IE Department to serve UPLB offices and private companies as can be seen in the attached updated summary of MSEP accomplishments.

MSEP deals mainly with the application of engineering principles to solve problems involving the design and operation of management systems throughout the enterprise. It uses new approaches and tools in the advent of technology and globalization. It combines information technology and business process redesign. Main study areas in which it will be involved are decision support systems, process analysis and design, operations management, quality management, and cost management.

Meanwhile, HSEP will concentrate its efforts in the improvement of the condition of the human element of the system; a task which is out of scope of MSEP. HSEP will cover study areas such as task and motion analysis, worker capability analysis and development, anthropometric data collection and design, and worksite/environmental analysis.

To further provide their differences, a summary table is given below.

Category	MSEP	HSEP
Approach	**Integrative** – can use inputs from different fields of IE to provide a systems approach/analysis	**Detailed/Specific** – More focused on the human aspects and needs
Main Equipment and Tools	**Information Technology** – mainly uses computers and software for simulation, modeling, statistical analysis, eng'g economic analysis, etc.	**Human Systems Laboratory Equipment and tools** – stopwatch, devices for taking human measurements, physical environment assessment tools, etc.
Applications/ Capabilities	Optimization of business operations, materials system design, aid in medium and long-term decisions (information system), help in process/system strategies, product design, integration of system functions, etc.	Establishment of process time standards, workplace design, assessment of human capability, health and safety assessment

Though it is a separate program, MSEP can be used to complement HSEP (and vice versa) in solving organizational problems in different industries so that the tasks will be easier using the tools from these two programs. For instance, a client who is a manufacturer of furniture would want to come up with a new design of office chair and consults IED. The department would need the capability of HSEP in the anthropometric data collection of its customers' measurements and come up with an initial design. And then, use the output from HSEP to analyze and determine the statistical distribution of the data collected via the software of MSEP.