Abstract

This project focuses on designing a computerized decision support system (DSS) to assist the Cal Poly Alumni Association with scheduling their Mustang Mentoring day. The current scheduling process is time intensive, error prone, and does not consider student preferences. The decision support system optimally generates multiple sets of pairs of students and mentors and schedules them avoiding conflicts and duplicates. The system was developed in Microsoft Excel using its Solver add-in. Excel was selected as the system platform also because of its relative popularity compared to alternative platforms. The DSS utilizes integer linear programming to maximize the total student satisfaction with their mentor assignments. The DSS replaces a process that used to take over an hour to one that takes less than ten minutes. The original process would have required employing 6 workers, while the new process requires only 1 worker to help generate assignments.