## **SLE352 Updated Project Goals**

**Project**: Rostering optimisation in a large tertiary hospital pharmacy department

**Client**: Andrew Chong (on behalf of Monash Medical Centre - Pharmacy Department)

**Team members**: Chris Swan, Kipp Hughes

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| Project Goals | Relevant Dates |
| Communication:   * Team members will meet twice a week on Mondays and Tuesdays from  12.30 – 18.30. * Team members will meet fortnightly with the client via conference call (Skype for Business).   + This is important to ensure both the client and the team members’ interests in the project remain aligned.     - These meetings are dependent upon the availability of the client.     - Where possible, additional face to face meetings will also be held. * The client will have access to the [GitHub repository](https://github.com/Swanbabe/Rostering). They will also be provided with a weekly progress report via email.   + This ensures the client remains informed about the project’s progression and can offer constructive contribution at meetings and the interim between them regarding the project’s direction and scope.     - These progress reports will commence in Week 6 (8/4/2019) once significant development is underway. | 11/3/19 – 21/5/19  18/3/19 – 28/5/19    8/4/19 – 13/6/19 |
| Outcomes:   * To demonstrate the advantages of using optimisation software in the context of rostering staff members in a workplace and to deliver a cost estimate for the implementation of this rostering system   + Within the optimisation field, one of the challenges is a lack of understanding of what it encompasses. A key component of this project is being able to demonstrate the potential applications for the use of optimisation. This is only useful if it can be effectively communicated in a non-technical, simple way.   + We will aim to provide the client with a summary of the resources required to implement this system and the approximate cost of obtaining and installing these resources. Simply presenting an optimisation model is inadequate: in order to deliver something that might contribute to a long-term solution, it is pragmatic to incorporate an outline of the financial costs as well.     - This demonstration and communication will be encompassed within the Community Science Forum on 27/5/19.     - We will also make a video of the presentation for the benefit of stakeholders not able to attend the Forum.     - This will be followed by a handover of resources to the client, which will take place at Monash Medical Centre on the 23/5/19. * To offer some examples of optimised rosters so that both the client and other stakeholders in the organisation can see the advantages and applicability of automated rostering system.   + These examples will include:     - Clinical Rosters and Accrued Days Off (ADO) Rosters for 4 Clinical Teams for a period of 6 months.       * based upon 2019 data (January – June)     - Yearly Rotation Roster for Pharmacy Interns       * Based upon 2018 data   + Using retrospective data means that these example rosters can be compared against those used by the client. | 11/3/19 – 24/5/19  27/5/19  27/5/19  29/5/19    24/5/19 |
| Specific Tasks:   * To develop an Integer Linear Program (ILP) for Clinical Rostering with the context of a large tertiary hospital pharmacy department for the purpose of streamlining this process for future rostering.   + This ILP should incorporate 4 clinical teams: General Medicine, Special Medicine, Critical Care, Digestive Health.   + Although our initial objective was to create an Accrued Days Off (ADO) roster, in order to create an appropriate ILP model it has proven necessary to recreate the roster for the clinical teams as the two are interdependent.   + There is also the potential to expand this rostering to entire rostering within the pharmacy department, including annual leave, as there are many dependencies between these aspects of rostering. However, it is necessary to limit the scope of the project to define achievable outcomes. * To develop an Integer Linear Program (ILP) for Intern Rostering to ensure that all interns receive an equal distribution of time for each rotation to maximise their learning experience.   + Each year the pharmacy department has 11 interns that do a placement in each of a wide variety of rotations in the pharmacy over a 54-week period.   + Achieving an optimal roster for this area would not only make for a positive learning experience for the interns but also better facilitate their incorporation into the pharmacy workplace. | 11/3/19 – 21/5/19    11/3/19 – 21/5/19 |