

Project proposal template – Faculty studentships Summer 2014

<i>Project title</i>	<input type="text" value="Mechanical Devices for Improving Ambulatory Chemotherapy"/>	<i>Director of Study</i>	<input type="text" value="Dr Shereen Nabhani"/>
<i>Second Supervisor</i>	<input type="text" value="Professor Jian Wang"/>	<i>School</i>	<input type="text" value="Pharmacy and Chem"/>
<i>Other members of supervisory team</i>	<input type="text" value="Dr Stephen Barton"/>	<i>Any requirements from applicant (eg degree in specific subject area)</i>	<input type="text" value="Engineering or related disciplines"/>

**Project summary
(max 1,000 characters)**

Ambulatory chemotherapy (AC) allows patients to receive their treatment anywhere anytime delivered via ambulatory infusion pumps. Elastomeric pumps (one type of ambulatory pumps) are often preferred due to their light weight, size and cost. However, studies have shown that their infusion rate is unpredictable due to several variables including temperature, positioning, viscosity etc

This has several serious repercussions including increased toxicity if the delivery is too fast, sub optimal dosing if the delivery is too slow.

This studentship will entail a complete analysis of the pump materiel properties which will inform the design of a device that can monitor and regulate the infusion rate.