

## Map of the module: Medicines by Design

This shows the relationship between the Chemical Storylines, the Activities and the Chemical Ideas. To aid planning, laboratory-based practical work is indicated by (P), activities involving IT skills are indicated by (IT) and those developing study skills by (S).

Chemical Ideas references in *italics* are covered in earlier modules and are included in synoptic learning outcomes for this module in the specifications. Emphasis in teaching and learning should be on the **new** (non-italicised) sections of Chemical Ideas. The degree to which revisited Chemical Ideas are studied will depend on the needs of individual students.

ACTIVITIES	CHEMICAL STORYLINE	CHEMICAL IDEAS
	<b>MD1</b> ALCOHOL CAN BE A PROBLEM	<b>6.4</b> <i>Infrared spectroscopy</i>
<b>MD2.1</b> Identifying unknown organic compounds (P) <b>MD2.2</b> Using spectra <b>MD2.3</b> An organic chemistry pyramid	<b>MD2</b> STATINS FOR ALL	<b>6.4</b> <i>Infrared spectroscopy</i> <b>6.5</b> <i>Mass spectrometry</i> <b>6.6</b> Nuclear magnetic resonance
<b>MD3.1</b> Reviewing isomerism  <b>MD3.2</b> Making a toolkit of organic reactions <b>MD3.3</b> Classifying organic reactions	<b>MD3</b> DESIGNER STATINS	<b>3.2</b> <i>The shapes of molecules</i> <b>3.3</b> <i>Structural isomerism</i> <b>3.4</b> <i>E/Z isomerism</i> <b>3.5</b> <i>Optical isomerism</i> <b>12.1</b> <i>Alkanes*</i> <b>14.2</b> A summary of organic reactions <b>14.1</b> Planning a synthesis
<b>MD4.1</b> Making and testing a penicillin (P) <b>MD4.2</b> A closer look at the structure of penicillins	<b>MD4</b> TARGETING BACTERIA	
<b>MD5</b> Check your knowledge and understanding (S)	<b>MD5</b> SUMMARY	

\* Synoptic learning outcomes state that students should be able to draw and interpret skeletal, structural and full structural formulae as representations, as described in **Chemical Ideas 12.1**.