# Integrating bioscience & clinical learning













## **Curriculum renewal**

> New postgraduate medical curriculum in 2011

- ✦ Old model (school leavers/graduates = 70%/30%)
  - 6 years
  - Bioscience 5 semesters over 2.5 years
- ✦ New model (graduates = 100%)
  - 4 years
  - Bioscience 4 terms in 1 year

## **Teaching and learning issues**

Ensure competence & equivalence in bioscience learning

- ✦ Different starting points
  - Biomedicine, science...
  - Melb, other Aus, International graduates

> Improve the integration of bioscience and clinical learning

- + 'pure' bioscience vs. 'applied' clinical
  - Problem/case-based approaches
- ✦ Ready access to quality resources
  - Information seeking/literacy
- Introduce new teaching and learning models and activities
  - Case-based learning
  - + Clinical portfolios

## Edu/Info technology

#### $\succ$ Key roles

- + Manage and deliver resources
- + Support learning activities
- + Streamline and support student administration
  - Clinical placements
  - Reporting
- Constraints
  - + Limited capacity
  - + Support for legacy systems
    - Concurrent curricula
  - ✦ New curriculum is a moving target

## **Activities & resources**

#### Informed by research

- ✦ Technology use
- + Resource use
- + Information literacy

#### Student centred

- Integrated system
- Multiple points of access
- ✦ Support for different learning styles
- ✦ User generated content
- ➤ Whole of course approach
  - ✤ Not discipline or subject based
  - Shared resources
  - ✦ Always accessible

## **Clinical placements**

### $\succ$ Where and when

- ✦ Individualised timetables
- + Messaging and announcements
  - SMS
  - Cohort, clinical school, group, individual

### ➢ Patients and procedures

- ✦ Electronic health records (EHR), procedure logs
- + Clinical portfolios
  - Assessment (formal and informal)
  - Federal reporting requirements

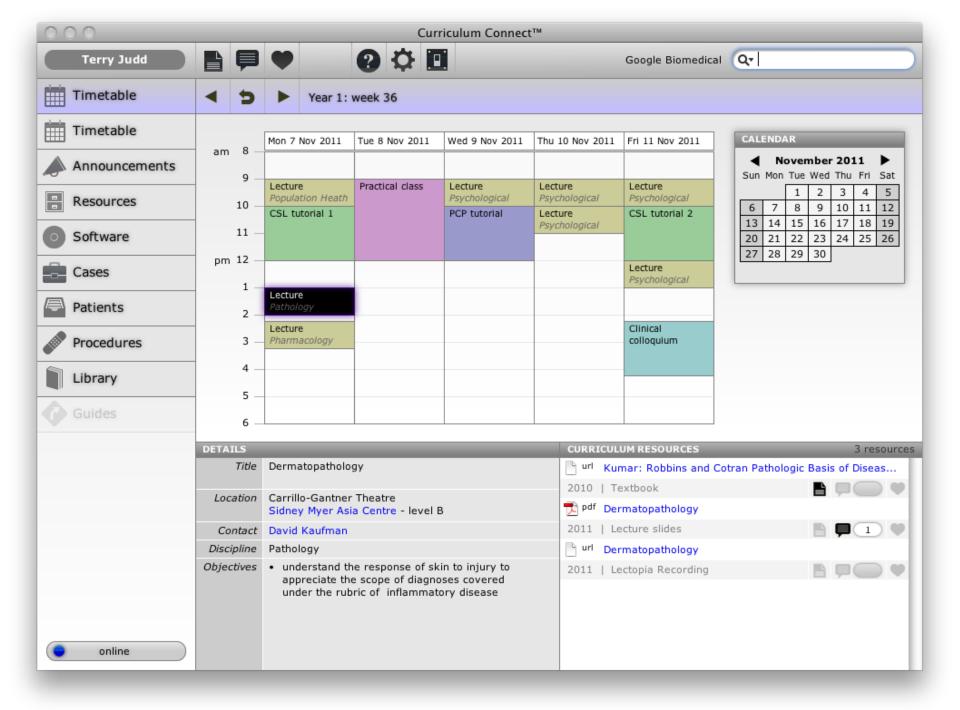
## **Curriculum Connect**



## **Key features**

#### Connecting students and curriculum

- ✦ Unrestricted access to best available resources
  - Prescribed
  - Recommended
  - Discovered
- + Linking learning activities and resources
  - User generated content (notes and comments)
- Rich mix of bioscience and clinical resources
  - Curriculum database
    - Case-based learning
    - Patient records and procedures
  - + Library
    - Wide selection of online textbooks (unrestricted access)
    - Medical search engines (including Google custom search)
    - Key clinical support tools (e.g. Australian Medicines Handbook, Therapeutic Guidelines)



~	$\sim$	$\sim$

Curriculum Connect™

Terry Judd	E 📮 🎔 🕜 🔅 🖬 Google Biomedical 💽							
Cases								
Timetable	CASES					CURRICULUM RESOURCES 63 resources		
	Year	Week	Block	Title		Def Amjad Akhtar		
Announcements	1	1	1	The Good Doctor		2011   Student Case (Session 1)		
	1	2	1	Amjad Akhtar		D pdf Amjad Akhtar		
Resources	1	3	1	Amjad's Fellow Students		2011   Student Case (Session 2)		
<ul> <li>Software</li> </ul>	1	4	1	Eleanor Fogarty		mov Trigger		
Soltware	1	5	1	Priya Narayan		2011   CSL Video		
Cases	1	6	1	David Craig		pdf Bartfai T, Conti B. Fever. Scientific World Journal. 2010		
	1	7	1	David Craig 2		2010   Journal article		
Patients	1	8	1	Peter Jones	B PO	html Patel MS, Collignon PJ, Watson CR, Condon RJ, Dohert		
	1	9	1	Norm Jones	B PO	1997   Journal article		
Procedures	1	10	1	Mai Tranh	B PO	url Harrison LH, Trotter CL, Ramsay ME. Global epidemiol		
Library	1	11	1	Simon Williams	B PO	2009   Journal article		
Library	1	12	1	Liam Gallagher-Hocking	B PO	pdf Guidelines for the early clinical and public health mana		
Guides	1	13	1	Hermione Gallagher-Ho	B PO	2011   Publication		
	1	14	1	George Cutler		url Kumar: Robbins and Cotran Pathologic Basis of Diseas		
	1	15	1	Kylie Brown	B PO	2010   Textbook		
	1	16	1	Tomas Strezovsk		💾 <sup>url</sup> Naish: Medical Sciences 2009.		
	1	17	1	Colin Daley	B PO	2009   Textbook		
	1	19	1	Brody Gilbert	B BO	url World Health Organisation - Health topics - Meningitis		
	1	20	1	Richard Roberts	B PO	2011   Website		
	1	21	1	Katherine Murray	B PO	url Victoria Government Health Information - Blue Book		
	1	22	1	James Chandler	R DO	2011   Website		
	1	23	1	Alice Determan	R I O	💾 <sup>url</sup> Victoria Government Health Information - Blue Book		
	1	24	1	Lauren Carlson		2011   Website		
	1	25	1	Jessica Harvey	R IO	🕒 <sup>url</sup> Chest Pain		
online	1	26	1	James Banting	B DO	2007   Medical Interview Video		
	1	26	1	James Banting		Burl Headacha		

000	Curr	iculum Connect™	
Terry Judd		Google	Biomedical Q-
Resources	Q diabetes	filter by type: none	▼ sort by: relevance ▼
Timetable	RESULTS		16 resources
	Def Court JM, Cameron FJ, Berg-Kelly K, Sv	wift PG. Diabetes in adolescence. Pediatric	Diabetes 9 (3 Pt. 1) : 255 - 262 (2008)
Announcements	2008   Journal article		
	<sup>url</sup> Cameron F. Teenagers with diabetes: n	nanagement challenges. Aust Fam Physicia	
- Resources	2006   Journal article		
	- 🕒 <sup>url</sup> Diabetes Australia		
Software	2011   Website		
Cases	🕒 <sup>url</sup> International Diabetes Institute		
Cases	2011   Website		
Patients	🕒 <sup>url</sup> Resources for young people with diabet	tes	
	2011   Website		
Procedures	🕒 <sup>url</sup> Gyst is a website for young people livin	ng with diabetes who are going through the	process of transition
	2011   Website		
Library	💾 <sup>url</sup> Type I Diabetes: Management		
Guides	2011   Lectopia Recording		
Guides	📄 <sup>url</sup> Type II Diabetes. Oral Hypoglycaemic A	Agents	
	2011   Lectopia Recording		
	📄 <sup>url</sup> Autoimmune Insulin Dependent Diabete	25	
	2011   Lectopia Recording		
	📄 <sup>url</sup> Social Economic Determinants of Health	h 5 - Diabetes / Obesity	
	2011   Lectopia Recording		
	📄 <sup>url</sup> Cameron A. The metabolic syndrome: v	validity and utility of clinical definitions for	cardiovasculardisease and diabetes risk pr
	2010   Journal article		
	🔁 <sup>pdf</sup> Autoimmune Insulin Dependent Diabete	25	
	2011   Lecture slides		
	🔂 <sup>pdf</sup> Type II Diabetes. Oral Hypoglycaemic A	Agents	
online	2011   Lecture slides		
	Pdf Tupo I Disbotoci Management		T

000		Curriculum Connect™								
Те	rry Judd		Google Biomedical Q-							
Libra	ary									
Tim.	etable	SEARCH TOOLS	TEXTBOOKS							
Time:	etable	Google Biomedical Search	M Gray's Anatomy for Students, 2nd ed. Drake (2009)							
Ann	ouncements	1 Discovery	M Color Textbook of Histology, 3rd ed. Gartner & Hiatt (2006)							
	ouncements	S PubMed	M Fundamental Neuroscience for Basic and Clinical Applicati							
Reso	ources	😒 Web of Knowledge	M Histology and Cell Biology - An Introduction to Pathology,							
			M The Human Brain, 6th ed. Nolte (2008)							
<ul> <li>Soft</li> </ul>	tware		M Netter's Essential Histology, 1st ed. Ovalle & Nahirney (2007)							
			M Cell Biology, 2nd ed. Pollard (2007)							
Case	es		M Wheater's Functional Histology, 5th ed. Young (2006)							
_			M Principles of Medical Biochemistry, 3rd ed. Meisenberg &							
Patie	ents		M Thompson & Thompson Genetics in Medicine, 7th ed. Nus							
			M Cellular and Molecular Immunology, 7th ed. Abbas (2011)							
Proc	cedures	RESOURCE COLLECTIONS	OTHER							
Libr	2224	M MD Consult	L Medicine LibGuide							
Libra	агу	BMJ BMJ Clinical Evidence	Population Health and Rural Health LibGuide							
Guid	uides	😌 Australian Medicines Handbook	Psychology and Behavioural Science LibGuide							
<b>U</b> Ouit	005	Therapeutic Guidlines (eTG Complete)								
		Click to preview, double-click to launch								
•	online		ess for a selection of key medical resources for clinicians and medical students. ooks, full-text journals, practice guidelines, patient information sheets and drug							

000	Curriculum Conr	ect™									
Terry Judd	• • •	Google Biomedical	Qr								
MD Consult: Kumar: Robbins and Cotran Pathologic Basis of Disease, Professional Edition											
🕨 🕨 url 🛛 http://www.mdconsult.com.ezp.lib.unimelb.edu.au/books/about.do?about=true&eid=4-u1.0-B978-1-4377-0792-2X5001) 🐼 [											
MD CONSULT AUSTRALIA Help   Newsletter   Create Account (Why Create an Account?)   Log in   Exit Home First CONSULT Books Journals Clinics Review Articles Patient Education Drugs Guidelines Images News CME											
Search This Book 🗘 for	Se	arch Translate Query									
You are here: Home > Books > Kumar: Robbin	ns and Cotran Pathologic Bas	ŵ CME ☑	Email to Colleague  🔒 Print Version								
<ul> <li>Contents Index</li> <li>About This Book</li> <li>Frontmatter</li> <li>Copyright</li> <li>Dedication</li> <li>Contributors</li> <li>Preface: The Golden Jubilee Edition</li> <li>Acknowledgments</li> <li>General Pathology</li> <li>Systemic Pathology: Diseases of Organ Systems</li> </ul>	Kumar: Robbins and Cotrar Edition, 8th ed. Copyright © 2009 Saunders, An Imprint of Elsevier About This Book "Remarkably up to date Provides the read deserves a place on the shelf of any health JAMA One of the best-selling medical textbooks of <i>Basis of Disease</i> is the one book that nearly also widely used by physicians worldwide. A the most dependable, current, and complete knowledge. At the same time, masterful edit mastering every concept remarkably easy. To optimal understanding of pathology.	der with a current understanding of disea care professional, irrespective of specia all time, <i>Robbins and Cotran Pathologic</i> all medical students purchase, and is "who's who" of pathology experts delive coverage of today's essential pathology ing and a practical organization make	<pre>&lt;&lt; Previous   Next &gt;&gt; see mechanisms and lty or level of training." rs rs</pre>								

00						Currio	ulum Connect™		
T	erry J	udd		•	03	0		Google Biomedical Q-	
Patients Q + P									
The second secon									
	1Y REC	ORDS							28 rec
I	D 🔺	Date	Seen by	Alias	Age	Sex	Condition	Meds	Setting
	12	15/11/2011	tsj	Mal	45	м	lower back pain	6	hospital in-patient
1	13	13/10/2011	tsj	Benny	55	м	seasonal flu	2	
1	14	13/10/2011	tsj	Bjorn	56	м	smokers cough	0	
	15	04/10/2011	tsj	Harry	20	м	chronic fatigue	0	
1	16	28/09/2011	tsj	Mary	25	F	sciatica	0	community - GP
1	18	19/09/2011	tsj	Albert	90			0	
1	19	26/09/2011	tsj	Wilma	60	F		0	
	21	26/09/2011	tsj	test recor	70		test	0	hospital in-patient
2	22	27/09/2011	tsj	George	45	м	test	2	community - GP
	23	27/09/2011	tsj	Fred	25	м	stubbed toe	0	hospital in-patient
2	24	27/09/2011	tsj	Beth	31	F	itchy scalp	1	
2	25	14/10/2011	tsj	111				1	
2	26	28/09/2011	tsj	111				0	
2	27	28/09/2011	tsj	test	25			0	
2	28	28/09/2011	tsj	test2	30			0	
2	29	13/10/2011	tsj	test3	35			0	

#### TRANSCRIPT

#### **Basic details**

record ID: 12 date: 15/11/2011 alias: Mal age: 45 sex: male condition: lower back pain setting: hospital in-patient relationship: single occupation: bricklayer smoking: [yes] 2 packs per week

Ī

×

00	Curriculum Connect™													
Terry Judd						• 0 🗘 🗖				Google Biomedical	Google Biomedical Q-			
<b>Ş</b>	Patier	nts		Q	÷									
Ê			DRECORD											
<u> </u>	ID V Date Seer		en by	Alias	Age		Sex	Condition	Meds	Setting				
	12	_	15/11/2011 tsj			Mal	45		М	lower back pain	6	hospital in-patient		
	SECT	ION		_		BASIC DETAILS						▶ GUIDES		
	Basi	c de	etails		0	ID		12						
0	Pres	enti	ing problem		۲	Date		15/1	1/2011					
	Past	me	dical histor	У	۲	Setting		ho	spital in-p	atient V				
â	Fam	ily h	history		۲	Alias	Alias Mal							
•	Soci	al h	istory		۲	Age	45							
	Medi	icati	ions		•	Sex	male							
	Heal	th n	maintenance	9		Relationship			single					
	Phys	sical	examinatio	on	۲	Occupation	bricklayer							
0	Inve	stig	ations		۲	Smoking	Smoking smoker V					pack years		
	Diag	nos	is		۲		2 packs per week							
	Mana	ager	ment	Alcohol				drinker 🔻				std. drinks per wk.		
	Note	es (r	reflection)				4 standard drinks per day (more on weekends)							
	Feed	Feedback			۲									
						Allergies		no						
						Condition		lowe	r back pa	in				
•	Records should not contain any information that will clearly identify the patient to another user. <b>Do not</b> enter the patient's real name in the alias field.											user.		

## **Research & evaluation**

### ➤ Usage audits and analytics

1321917186 init 1321917186 platform.win 1321917186 client.desktop 1321917190 online=true 1321917198 login.authenticate.true 1321917198 installedversion=003 1321917198 currentversion=003 1321917198 login.goMain 1321917201 module.timetable 1321917207 module.Resources 1321917211 module.Cases 1321917217 cases.case.id=34 1321917234 cases.case.id=33 1321917253 cases.case.id=32 1321917273 cases.case.id=31 1321918710 module.Resources 1321918718 resources.search.query=limb,filter=none,sort=relevance 1321918722 resources.resource.id=5268 1321919290 toolbar.guit 1321919290 cc.quit

## **Acknowledgements**

- + Wai Chan
- + Marco Di Leo
- Charles Malpas
- + Andrew Bonollo
- + Andrew Glenn





Terry Judd, Kristine Elliott & Geoff McColl Medical Education Unit The University of Melbourne





