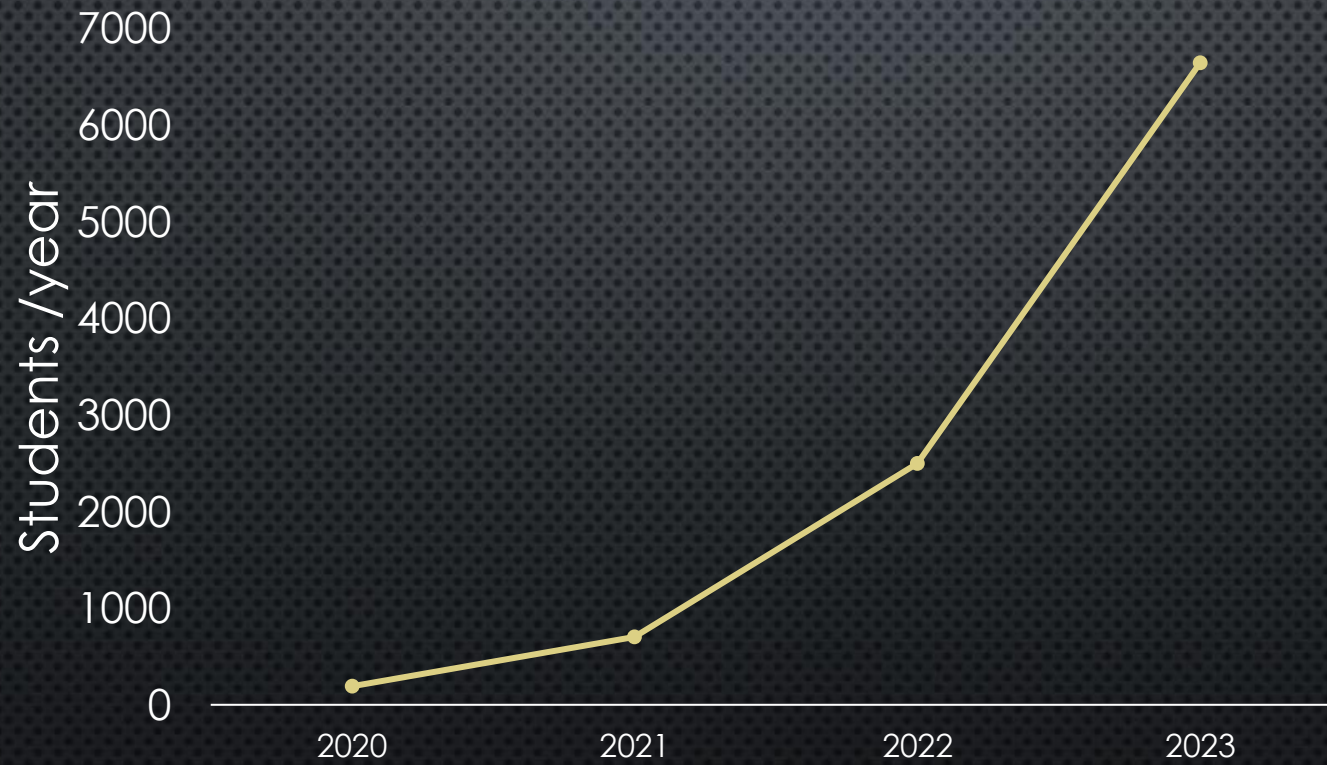


**BME 3:
ENGINEERING INNOVATIONS IN
THE TREATMENT OF DIABETES
(ONLINE)**

**This class answers the question,
“What is biomedical
engineering?”**

BME 3 ENROLLMENT



**WHAT IS THE IDEAL
CLASS SIZE?**

**BME 3 ENABLES US TO OFFER
MORE
SMALL UNDERGRADUATE CLASSES.**

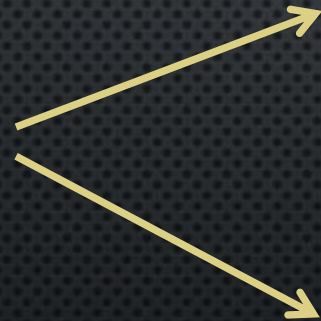
WHO TAKES BME 3?



BME3: TREATING DIABETES

Winter 2022

39 BME students



MAJORS	
14.5%	Undeclared
12.3%	Business Economics
7.9%	Business Administration
5.9%	Economics
4.4%	Criminology, Law and Society
4.3%	Computer Science
4.2%	Biological Sciences
4.0%	Education Sciences
3.9%	Psychological Science
3.7%	Sociology
3.1%	Mathematics
2.7%	Psychology (BS)
2.4%	Political Science
2.1%	Quantitative Economics
2.0%	Film and Media Studies
1.9%	Psychology (BA)
1.7%	Unaffiliated
1.3%	Public Health Sciences
1.2%	Biomedical Engineering
1.1%	International Studies
1.1%	Urban Studies
1.0%	English
0.9%	Computer Science and Engineering
0.9%	Art
0.7%	Public Health Policy
0.7%	Pharmaceutical Sciences
0.6%	Dance
0.6%	Chemistry
0.5%	Biomedical Engineering: Premed
0.5%	Literary Journalism
0.4%	History
0.4%	Game Design and Interactive Media
0.4%	Computer Engineering
0.3%	Business Information Management
0.3%	Mechanical Engineering

0.3%	Music
0.3%	Physics
0.3%	Social Ecology
0.3%	Informatics
0.3%	Cognitive Sciences
0.3%	Electrical Engineering
0.3%	Drama
0.3%	Chemical Engineering
0.3%	Aerospace Engineering
0.2%	Anthropology
0.2%	Social Policy and Public Service
0.2%	Philosophy
0.2%	Software Engineering
0.2%	Language Science
0.2%	Applied Physics
0.2%	Art History
0.2%	Civil Engineering
0.2%	Dance - Performance
0.1%	East Asian Cultures
0.1%	Gender and Sexuality Studies
0.1%	Human Biology
0.1%	Psychology and Social Behavior
0.1%	Spanish
0.1%	Neurobiology
0.1%	Japanese Language and Literature
0.1%	Microbiology and Immunology
0.1%	Environmental Science and Policy
0.1%	Comparative Literature
0.1%	Chinese Studies
0.1%	Asian American Studies
0.1%	Biology/Education
0.0%	African-American Studies
0.0%	Computer Game Science
0.0%	Environmental Engineering
0.0%	Earth System Science
0.0%	Materials Science and Engineering
0.0%	Korean Literature and Culture
0.0%	French

WHY?

1. BME 3 fulfills a general education requirement.
2. Schedule flexibility (athletes, commuters, people with full time jobs).
3. It's available. (Many intro courses at UCI are full.)

GENERAL EDUCATION REQUIREMENTS AT UCI

I. Writing (two lower-division plus one upper-division course)

II. Science and Technology (three courses)

BME 3 is the only engineering course that satisfies this requirement!

III. Social and Behavioral Sciences (three courses)

IV. Arts and Humanities (three courses)

V. Quantitative, Symbolic, and Computational Reasoning, with subcategories Va and Vb (three courses that may also satisfy another GE category)

VI. Language Other Than English (one course)

VII. Multicultural Studies (one course that may also satisfy another GE category)

VIII. International/Global Issues (one course that may also satisfy another GE category)

Category II. Science and Technology

Course Learning Objectives

After completing a Category II GE course, successful students will be able to do ALL of the following:

1. Demonstrate an understanding of fundamental laws of science OR principles underlying design and operation of technology.
2. Demonstrate an understanding of natural phenomena, related to the course discipline, that surround and influence our lives.
3. Be able to do ONE OR MORE of the following:
 - a. Describe how scientists within the course discipline approach and solve problems.
 - b. Apply scientific knowledge/theoretical models used in the course discipline to solve problems and draw conclusions using qualitative and/or quantitative analysis of data and concepts.
 - c. Explain the scope and limitations of scientific inquiry and the scientific method as evidenced in the course discipline.

Biomedical Engineering, B.S.

Freshman		
FALL	WINTER	SPRING
MATH 2A	MATH 2B	MATH 2D
CHEM 1A	CHEM 1B	CHEM 1C
BME 1	PHYSICS 7C	CHEM 1LC
General Education	PHYSICS 7LC	PHYSICS 7D
	General Education	PHYSICS 7LD
Sophomore		
FALL	WINTER	SPRING
MATH 3A	MATH 3D	MATH 2E
PHYSICS 7E	BME 50A	BME 50B
BME 60A	BME 60B	BME 60C
	General Education	STATS 8
Junior		
FALL	WINTER	SPRING
BME 110A	BME 110B	BME 110C
BME 120	BME 150	BME 111
BME 130	BME 140	BME 121
ENGR 190W	General Education	
Senior		
FALL	WINTER	SPRING
BME 180A	BME 180B	BME 180C
Engineering Elective	Engineering Elective	BME 170
General Education	General Education	Engineering Elective
General Education	General Education	General Education

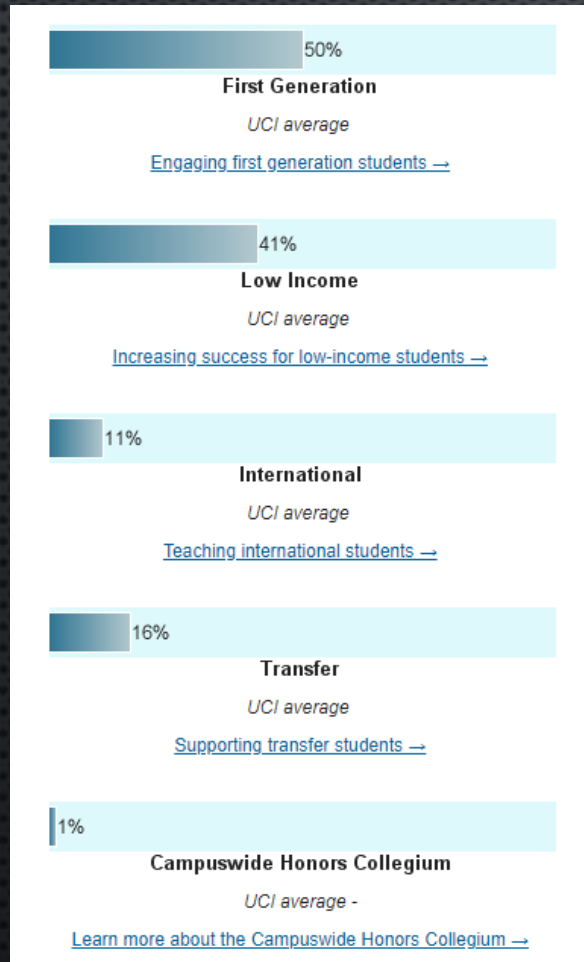
Business Economics, B.A.

1500 total students
About 300 took BME 3

Freshman		
FALL	WINTER	SPRING
ECON 20A	ECON 20B	Intro. Soc. Sci. course
MATH 2A	MATH 2B	ECON 25
Lower-Division Writing	Lower-Division Writing	General Education
	General Education	
Sophomore		
FALL	WINTER	SPRING
ECON 15A	ECON 15B	ECON 122A
ECON 100A	ECON 100B	ECON 100C
SOC SCI 3A	Intro. Soc. Sci. course	General Education
General Education	General Education	General Education
Junior		
FALL	WINTER	SPRING
ECON 122B	U-D Econ. course	U-D Econ. course
U-D Econ. course	General Education	General Education
U-D Econ. course	Electives	Electives
General Education	Electives	Electives
Senior		
FALL	WINTER	SPRING
U-D Econ. course	U-D Econ. course	U-D Econ. course
Electives	Electives	Electives
Electives	Electives	Electives
Electives	Electives	Electives

DEI IMPACT

BME3: TREATING DIABETES

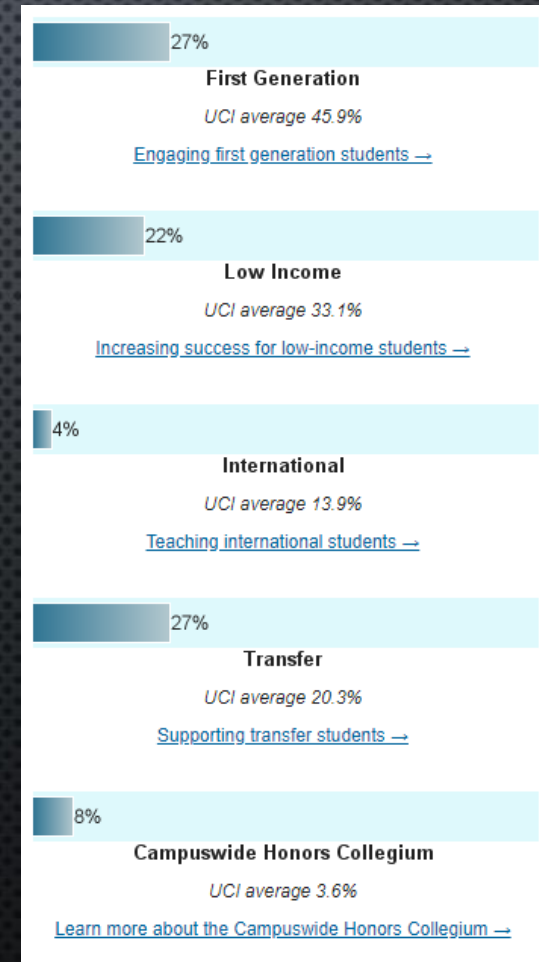


1,800 students

1,476 students

Spring 2023
only

BME170: BIOMEDICAL ENG LAB



37 students

30 students

ELECTIVE COURSES: IDEAS

Online

Anything centered on diseases, organs

ENROLLMENT = \$\$\$

UCDAVIS

Budget Model Allocations

Finance & Business • BIA • Budget • Budget Process • Budget Model Allocations

1. Undergraduate Tuition Revenue Pool

✓ 2022-23

- > Pool to Allocate: \$257,421,000
- > NRST in Pool: \$32,052,000
- > Value of SCH: \$80
- > Value of Major: \$1,674
- > Value of Degree: \$1,872

BME 3 IN 2023

6650 STUDENTS X 4 CREDIT HOURS =
25,600 SCH X \$80 =

\$2,048,000
FOR SCHOOL OF
ENGINEERING

STUDENTS HAVE LOTS OF PROBLEMS

to jpbrody@uci.edu ▾

Goodafternoon Professor Brody,

I wanted to let you know that I was just released from St.Francis trauma center as I was at a local park in Norwalk and was shot during a drive-by shooting in the leg around 5pm. I am on heavy medication and I figured I'd notify my professors as we near finals to request simple accomodation such as deadline extensions etc. I'd prefer to speak on the phone if possible instead of email as it feels laborious to write cohesive emails at the moment. I will attach some photos for reference. My phone number is [REDACTED] and I am available anytime.

Thank you for accommodating me,
[REDACTED]

5 Attachments • Scanned by Gmail ⓘ



Dear Professor Brody,

My name is Sheena Danesh-Tellez, I am a Campus Social Worker at UCI. I have been working with student [REDACTED] since 12/14/2022. She was referred to our office due extenuating circumstances related to medical, legal, law enforcement, safety, housing, familial and financial stressors. Due to these extenuating factors, [REDACTED] would like to request an incomplete in your course.

I am in support and recommend an incomplete, due to the aforementioned reasons. If granted [REDACTED] is aware she will need to reach out to you to discuss the logistics of completing the outstanding work.



Aliso Ridge Behavioral Health

Discharge Order / Aftercare Plan

Name :	[REDACTED]	DOB :	[REDACTED]
MRN :	[REDACTED]	DOA :	5/22/2023
Case ID :	2304850	Sex/Age :	Female / 21y
Unit :	2 West/B314(1)	Doctor :	Gaurav Gandotra, MD

Discharge Order / Aftercare Plan

Discharge Order / Aftercare Plan

Patient Name: [REDACTED]
Transportation Address: N/A
Discharge Address:
Address1: patient won PCH- Patient AMA
Disposition:
Left AMA
I. Physicians
Diagnosis:
Primary Diagnosis: Bipolar disorder, current episode manic severe with psychotic features (F31.2)
Secondary Diagnosis: Bipolar disorder, unspecified (F31.9)
Telephone Order: No
II Social Service / Case Manager

TECHNOLOGY

PERUSALL (PEER-PEER LEARNING)

The screenshot displays the Perusall web application interface. At the top, the course path is 'BME 3 LEC A: TREATING DIABETES (13505) > Week7ClinicalStudies'. The main content area shows an article titled 'Searching for Clarity: A Primer on Medical Studies' by GINA KOLATA, dated SEPT. 29, 2008. The article text is highlighted in yellow, and several segments are annotated with red question marks, indicating peer-review questions. A right-hand chat window, titled 'Current conversation', shows a thread of messages from various users discussing the article's content, with each message including a score and a timestamp.

Perusall > BME 3 LEC A: TREATING DIABETES (13505) > Week7ClinicalStudies

Page 1

Group 8

Help

Jim Br

BME 3 LEC A: ...

- My Courses
- Course home
- Settings
- Gradebook
- Student view
- Notifications
- Notes
- Add to my calendar

Content

Library

- DiscoveryandManufact...
- HistoryofBloodGlucose...
- Medical Studies Vary i...
- Opinion_ Could Wom...
- OscarMinkowski
- QuestForNormoglycae...
- RewritingMedicalHisto...
- The Unknown Designe...
- Transcripts of Intervie...
- TrialsandTribulations
- UCI-Yearbooks_1967_p...
- 1965-1966AcademicPr...
- Week7ClinicalStudies
- AfrezzaLabel
- MargaretCranePregna...

Assignments

Show old assignments

Chats

Groups

- Announcements
- General discussion

HEALTH

Searching for Clarity: A Primer on Medical Studies

By GINA KOLATA SEPT. 29, 2008

Everyone, it seemed, from the general public to many scientists, was enthralled by the idea that beta carotene would protect against cancer. In the early 1990s, the evidence seemed compelling that this chemical, an antioxidant found in fruit and vegetables and converted by the body to vitamin A, was a key to good health.

There were laboratory studies showing how beta carotene would work. There were animal studies confirming that it was protective against cancer. There were observational studies showing that the more fruit and vegetables people ate, the lower their cancer risk. So convinced were some scientists that they themselves were taking beta carotene supplements.

Then came three large, rigorous clinical trials that randomly assigned people to take beta carotene pills or a placebo. And the beta carotene hypothesis crumbled. The trials concluded that not only did beta carotene fail to protect against cancer and heart disease, but it might increase the risk of developing cancer.

It was "the biggest disappointment of my career," said one of the study researchers, Dr. Charles Hennekens, then at Brigham and Women's Hospital.

Current conversation

At the time, almost everyone was invested in beta carotene as a potential protection against cancer. In the 90s, the evidence suggested that the antioxidant beta carotene, which was found in fruit and vegetables and turned into vitamin A by the body, was the solution for better health. Animal studies suggested that it would actually prevent cancer. And then the clinical trials began and all hope for beta carotene vanished. The antioxidant did not protect against cancer, but rather it could increase the risk of cancer.

Feb 20 6:45 am Score: 2

At the time, people blindly believed that beta carotene could cure cancer, but there was no evidence to support this inference. So most people were crazy to ingest it because of this hypothesis, regardless of the consequences.

Feb 20 8:57 pm Score: 1

When a craze is promoted for the benefit of mankind, the evidence for it will matter less

Feb 20 9:13 pm Score: 1

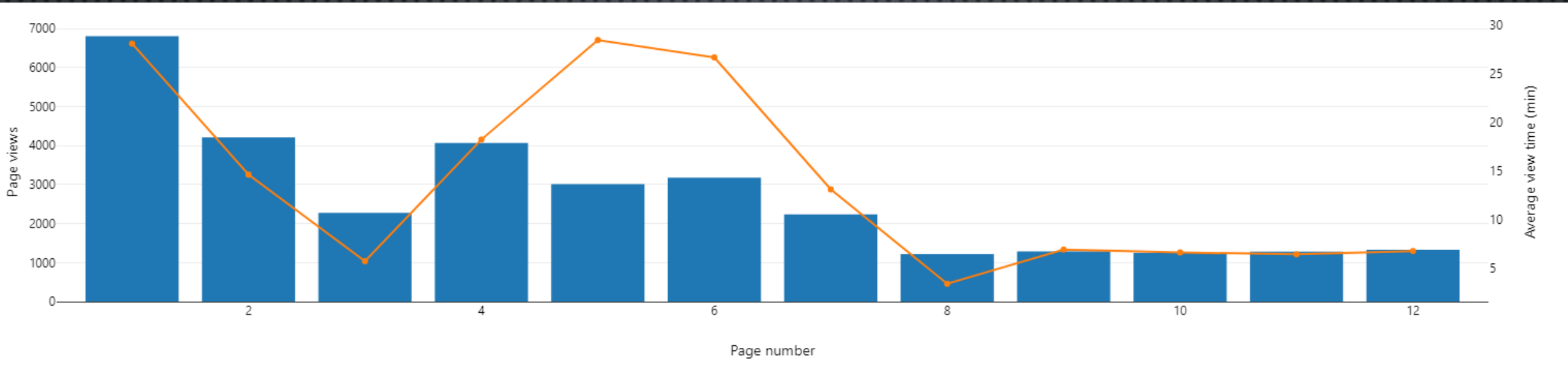
Very quickly one learned that by taking dosages up to 4-10 years, small dosages of beta carotene actually cause adverse effects to those with vulnerable conditions to the lung. Most especially amongst those who smoke, their chances of developing lung cancer from taking dosages over a prolonged time increases their risk to lung cancer; pinning evidently that despite evident benefits of ingesting supplements, in some instances, ingesting supplements can actually bring about negative consequences to n individuals health.

Feb 20 10:59 pm Score: 2

B I A [Rich text editor icons]

Enter your comment or question and press Enter. Mention a friend by typing @. Add hashtags by typing #.

PERUSALL ANALYTICS



VIDEO

YUJA (VIDEO HOSTING/CAPTIONING)

The image displays a video player interface. The main video content shows a diagram on a black background with yellow text and arrows. The diagram starts with 'Pancreas' and 'Homogenizer' connected by a horizontal arrow. A vertical arrow points down from 'Homogenizer' to the text 'Cells, proteins, other molecules'. From this text, another vertical arrow points down to 'some property'. Two diagonal arrows then branch out from 'some property' to two rectangular boxes labeled 'Fraction 1' and 'Fraction 2'. Below the diagram, a subtitle reads 'And the goal then is to isolate the insulin'. The video player controls at the bottom show a play button, a volume icon, a progress bar at 02:26 / 17:02, and icons for closed captions, full screen, and settings.

Pancreas → **Homogenizer**

↓

Cells, proteins, other molecules

↓

some property

↙ ↘

Fraction 1 Fraction 2

And the goal then is to isolate the insulin

Search Video

insulin

Search Results [47]

- And the goal then is to isolate the insulin 02:26
- The standard way to isolate insulin, 02:34
- and that's to be able to test where the insulin is. 03:48
- All I need to 04:34

VIDEO EDITING

The image displays the Adobe Premiere Pro interface for a video editing project titled "Javier x Lila Import Export - Edited". The interface is divided into several key areas:

- Project Panel (Top Left):** Shows a bin named "Javier Editing at Computer B Roll" containing 11 items. Selected items include "Edit Mode Javi_1.mov" (16:03), "No Premiere in Shot Editi..." (7:07), "Export Mode Javi_2.mov" (6:02), and "Edit Mode Javi_0.mov" (9:09).
- Source Monitor (Top Center):** Displays the current video source, "Edit Mode Javi_1.mov", in a "Fit" view. The timeline shows the current position at 00:00:33:09, with a total duration of 00:01:16:15.
- Effect Controls (Top Right):** Shows the "Lumetri Color" effect applied to the source. The "Basic Correction" section is active, with settings for Input LUT (None), Intensity (50.0), White Balance, Temperature (-1.5), Tint (0.0), Saturation (100.0), Exposure (-0.3), Contrast (0.0), and Highlights (-19.2).
- Timeline (Bottom):** Shows a multi-track editing timeline for "Lila x Javier Import Export". The tracks include:
 - Subtitle:** Contains text segments like "review the files on ...", "and bring...", "A new he...", "so the...", "W...", "open the new...", "Choo...", "And Pre...", "to social m...", and "Use t..."
 - Adjustment Layers (A1-A2):** Multiple "fx Adjustment Layer" tracks are visible, used for color grading and audio processing.
 - Video (V1-V4):** The main video track (V1) shows a sequence of clips from the project bin, including "Import", "Edit", "Nested S", "C13", "Expo", "Content", "Nested S", "Hide L", and "Save".
 - Audio:** Audio tracks (A1, A2) show waveforms and processing effects like "Const" and "Cor".