總校長咖啡早會

旅行者的故事
財務最新消息

查永茂博士 – 總校長

2024年3月13日

2023-24年學校最新消息

- 課程優化：石壁和分子生物實驗室2.0
- 2024-25年預算
- 學費增加
- 比較
- 2024-25年度教師招聘
- 參訪大學


JAM 2023
ISF 20th Anniversary Celebration
弘立二十週年慶典
JAM ON!
Saturday, 18 November, 2023 | 11:00A.M. to 4:00P.M.
2023年11月18日（星期六）| 上午11:00－下午4:00
ISF 20th Anniversary Celebration at The Jam 2023
弘立二十週年慶典暨Jam 2023
ISF School Fair 弘立校園遊藝會


Secondary Basketball Courts
中學籃球場
Abseiling 沿繩下


ISF弘立
EXPERIENCE
知行 & 合一
EXCELLENCE
Games & Activities
遊戲和活動
Bouncy Castles
Beauty Bar
Nail Bar
Seating Areas
20
ISF弘立


Games & Activities
遊戲和活動
Block
座大樓
20
ISF弘立


20
ISF 弘立


303
WORLD JUNIOR W
APIONSHIPS 20


ISF弘立
EXPERIENCE
知行&合一
EXCELLENCE


WINSTON SHEN 沈煜庭
Grade 12 Fire 十二年級火
20
ISF 弘立
EXPERIENCE
知行&合一
EXCELLENCE


20
ISF 弘立


The ISF Academy
20th Anniversary Celebration
弘立書院二十週年慶典
ISF弘立


20
ISF弘立


LEVEL 1 SOUTH LOBBY
Exhibition Halls A-F
Rooms 1-25
ISF 弘立

1023

Investigating the Ratio of Nitrogen-Fixing and Cellulose-Degrading Bacteria in an Overall Hydroponic Plant System

Vincent Pon 0013094@student.isf.edu.hk

Abstract Number: 1234648

Introduction

Method

Discussion

LB plates allow the growth of a plethora of bacteria due to their traits of being rich with nutrients (Figure 2). CMC plates are designed only for the growth of cellulose-degrading bacteria. Bacteria are tested for this function by doing an iodine stain which will give clear zones as seen in figure 3. M710 plates only allow the growth of nitrogen-fixing bacteria (Figure 4).

In Table 1, which showed the CFU (colony forming unit) of bacteria growth on LB, CMC and M710 plates. All plant samples which had bacteria growth on LB agar plates also had nitrogen-fixing bacteria growth. The ratio of bacteria that grow on LB plates compared to those that grew on M710 had an average ratio of 3:1, which means that nitrogen-fixing bacteria are crucial for many hydroponic plant's survival and ability to sustain.

Comparing bacteria growth on LB and CMC plates, there was an average ratio of 5 bacteria on LB 1 bacteria on CMC out of the nine plant samples which were investigated. This shows that cellulose-degrading bacteria play a crucial part in recycling nutrients and providing the plant with newly attained energy, but it must be underlined that plants can also derive energy from other sources via photosynthesis. Additionally, it can also be seen that plant samples/sources which didn't regularly change their water and were older often had more cellulose-degrading bacteria growth. These bacteria come into use the most to help decompose dead or rotting material. If the plant's water was changed regularly, the chances of plant material needing to be broken down to prevent build-up would be lower. Thus, there would be a lower chance of cellulolytic bacteria being in their system.

Conclusion

The data collected shows that hydroponic plants require nitrogen-fixing bacteria due to their inability to derive nitrogen from soils, unlike their on-land counterpart plants; cellulose-degrading bacteria, on the other hand, isn't always required as plants can derive energy from other sources and still sustain.

This investigation links to SDG goal #15: life on land. Experimenting with and studying various bacteria in a hydroponic plant environment advances our understanding of how microbes can influence plant health, growth, and biodiversity. A better understanding of plant-microbe symbiosis can help humans understand how to protect and restore ecosystems, preserve biodiversity, and ensure the long-term use of land and terrestrial resources. Observing Figure 1 where all hydroponic farms in Hong Kong are located, we can clearly identify a lack of farms in more populous areas, hence this project can potentially help raise awareness to these new agriculture methods and improve agriculture efficiency.

Acknowledgements

This work was funded under the ISF Staryuan Program. Special thanks to Dr. Perls, Ms. Grace, Mr. Mena, Dr. Griffin, and Ms. Ibarra.


水口經籠箕灣
SHUI HAU VIA LO KEI WAN
石壁
SHEK PIK

BAUHINIA EXPERIENTIAL LEARNING LIMITED

紫荊體驗學習有限公司


BELL
紫荊體驗學習
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ISF弘立


BELL
紫荊體驗學習


BELL


NOTICE
NO TRESPASSING
BAUHINIA EXPERIENTIAL LEARNING LIMITED

短期租約

- 租用五年
- 修復而非修改
- 保護現有樹木
- 社區外展和教育

分子生物實驗室 2.0


Thermo
SCIENTIFIC
DANGER


CAROLINA
Misc


Shuyuan
Molecular
Biology
Laboratory
分子生物
實驗室

弘立人工智能實驗室

- 在弘立建立人工智能實驗室
- 了解人工智能技術
- 大型語言模型 (LLM)
- Prompts (給人工智能的文字指令)
- 人工智能在學習的應用
- 聊天機械人：設計與使用
- 人工智能對世界廣泛應用

智能教育研究系統


弘立學術
體驗學習
學生關懷和學習態度
外來數據
「書院」研究
POWERSCHOOL 數據
入學評估
輸入
智能教育研究系統 (LAS)
輸出
成績單
分析報告
語言分析
資源分配分析
職員分析
趨勢分析
招生跟蹤

2024-25年的財務規劃

2024-25年弘立書院

財務和學費

- 財政預算
- 學費增加
- 比較

2024-25 預算

	2022-23 HK$'000	%	2024-25 HK$'000	%
收入:				
學費	515,026	*79%*	570,204	*85%*
其他收入	68,841	*11%*	76,444	*12%*
由基金會提供的資助	64,041	*10%*	21,389	*3%*
	647,908	*100%*	668,037	*100%*
營運費用 :				
薪酬及福利	440,044	*73%*	467,481	*73%*
其他支出	164,795	*27%*	171,540	*27%*
	604,839	*100%*	639,021	*100%*
非營運費用 :	48,495		30,503	
淨虧損	**(5,426)**		**(1,487)**	

建議學費增幅

	2023-24 (HK$)	2024-25 (HK$)
學費增加 (%)	4.5%	4.5%
預備班及一至五年級	221,130	231,080
國際文憑中學項目 (六至十年級)	256,910	268,470
大學預科項目 (十一及十二年級)	279,290	291,860

基金會支持項目

「書院」

- 課程 / 項目 — 創客坊、分子生物學、環境研究和可持續性倡議。
- 顧問費 — 大學教師和外部顧問的酬金。
- 2024-25預算 — 營運開支1,100萬港元。

石壁

- 種子基金 — 500萬港元。

弘立幼稚園

財務和學費

- 財政預算
- 學費增加
- 比較

2024-25 預算

	2023-24 HK$'000	%	2024-25 HK$'000	%
收入:				
學費	46,251	*97%*	48,791	*97%*
其他收入	1,289	*3%*	1,642	*3%*
	47,540	*100%*	50,433	*100%*
營運費用 :				
薪酬及福利	29,033	*68%*	32,616	*68%*
其他支出	13,382	*32%*	15,588	*32%*
	42,415	*100%*	48,204	*100%*
非營運費用 :	6,093		7,640	
淨虧損	**(968)**		**(5,411)**	

建議學費增幅

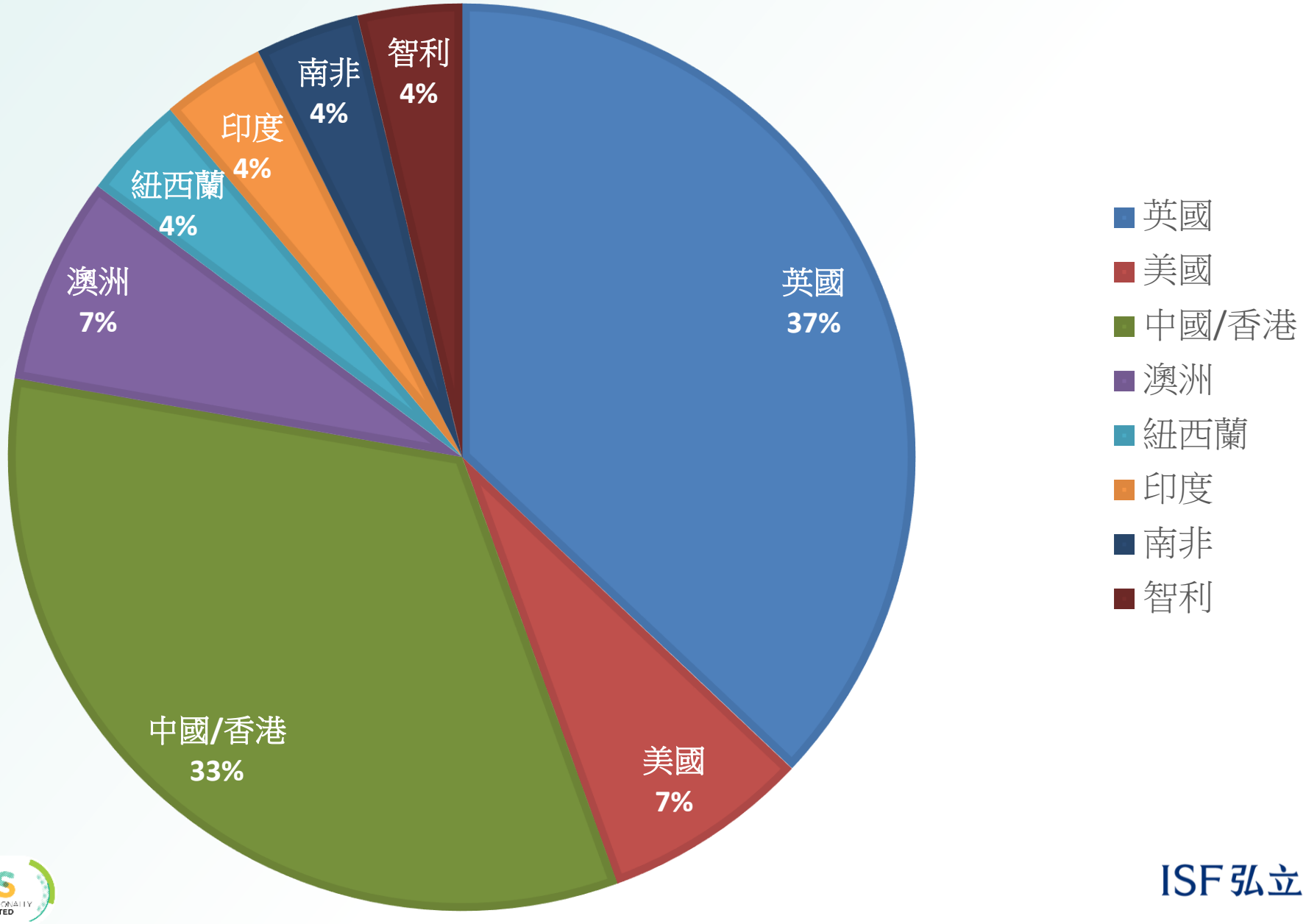
	2023-24 (HK$)	2024-25 (HK$)
學費增加 (%)	4.5%	4.5%
半日班 (一及二年級)	140,580	146,905
延展班 (二年級)	281,160	293,810

2024-25年度教師招聘

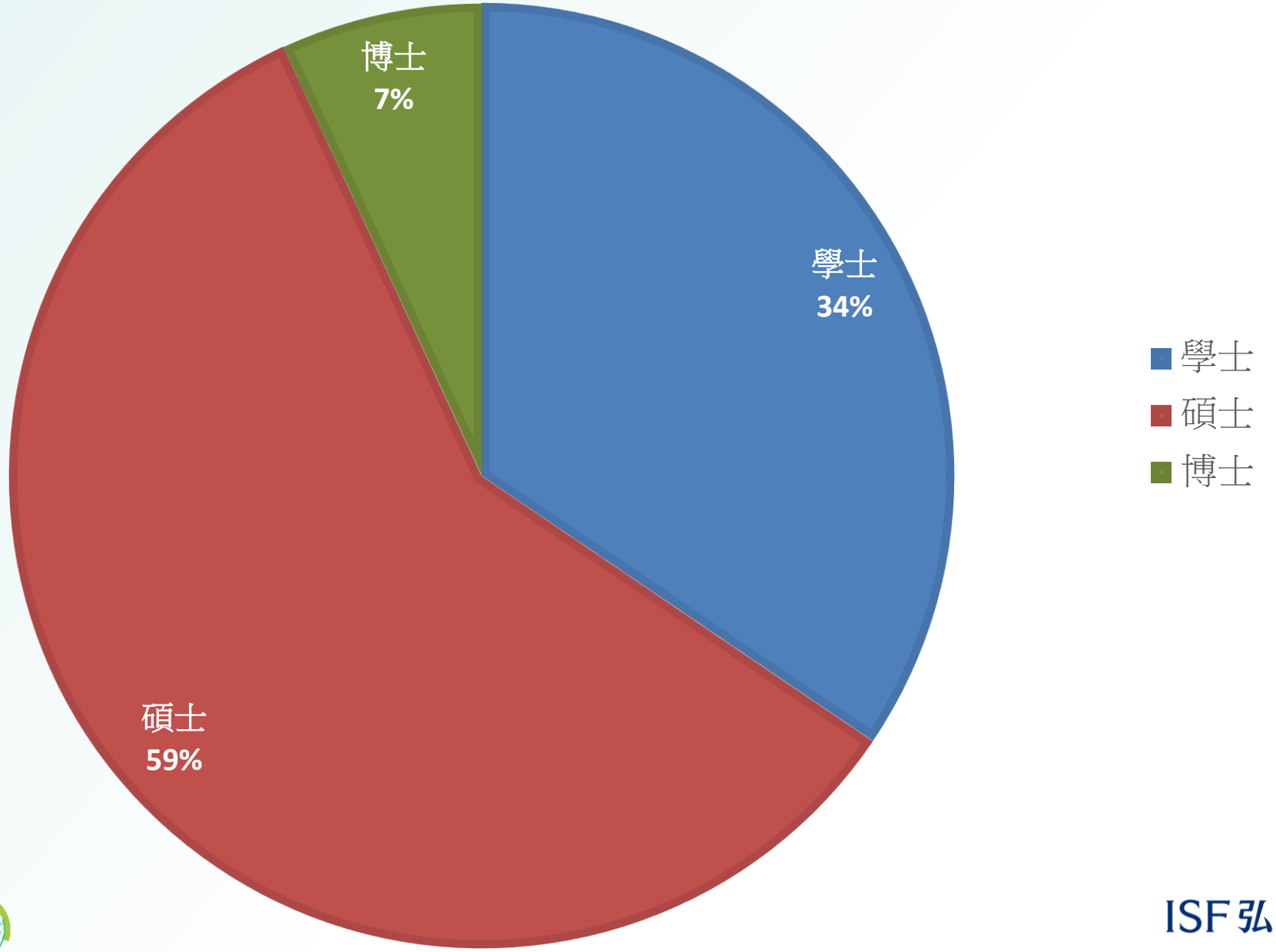
主要目標: 人力資源

2023-24 年現任教師：
2024-25 新學年的留任率 → 96.03%

2024-25年度教師招聘：國籍



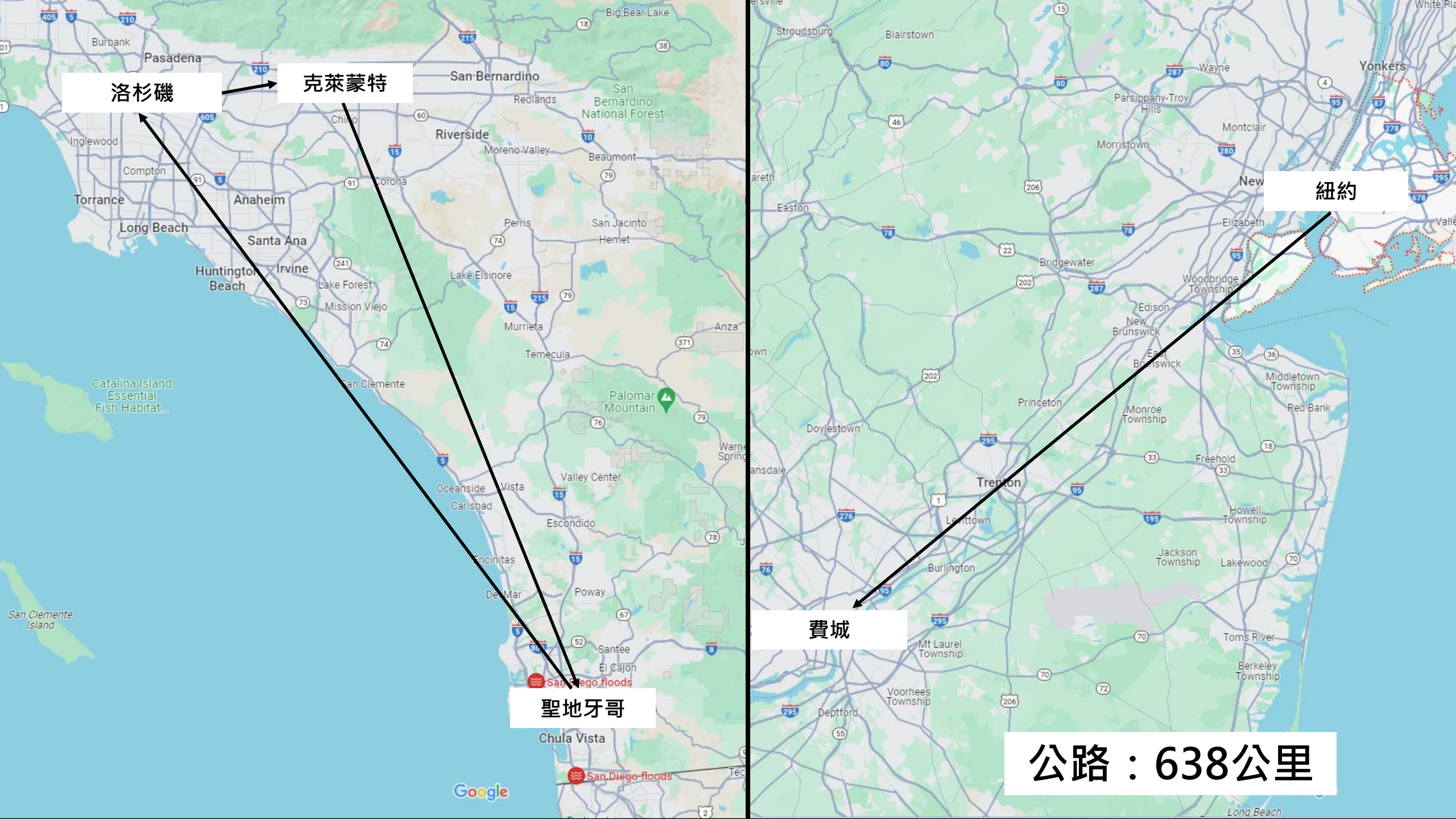
2024-25年度教師招聘：學歷



旅行者的故事：
弘立總校長參訪大學

旅行月份	目的地
2023年9-10月	都柏林
2023年12月	溫哥華、基隆納和三藩市
2024年1月	墨爾本和曼谷
2024年1-2月	倫敦、多倫多、波士頓、紐約、費城、洛杉磯、克萊蒙特和聖地牙哥

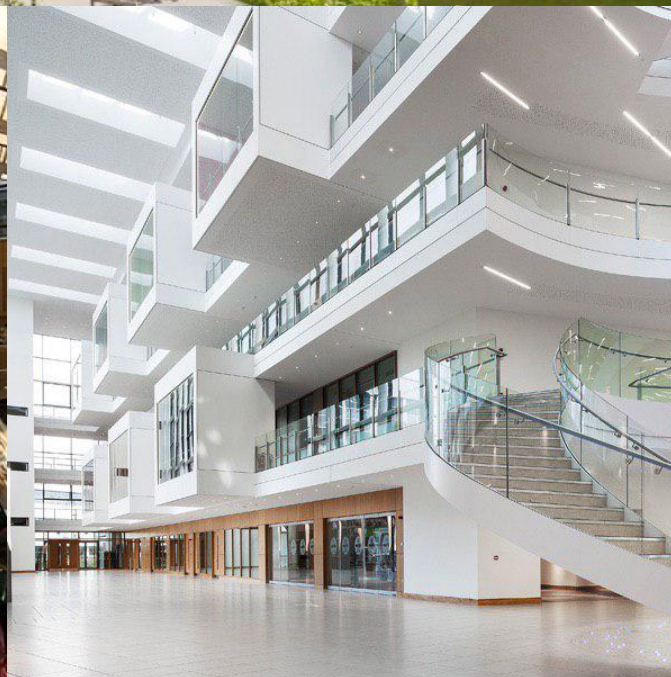
飛行: 91,230公里


洛杉磯
克萊蒙特
聖地牙哥
紐約
費城
公路：638公里

愛爾蘭

RCSI

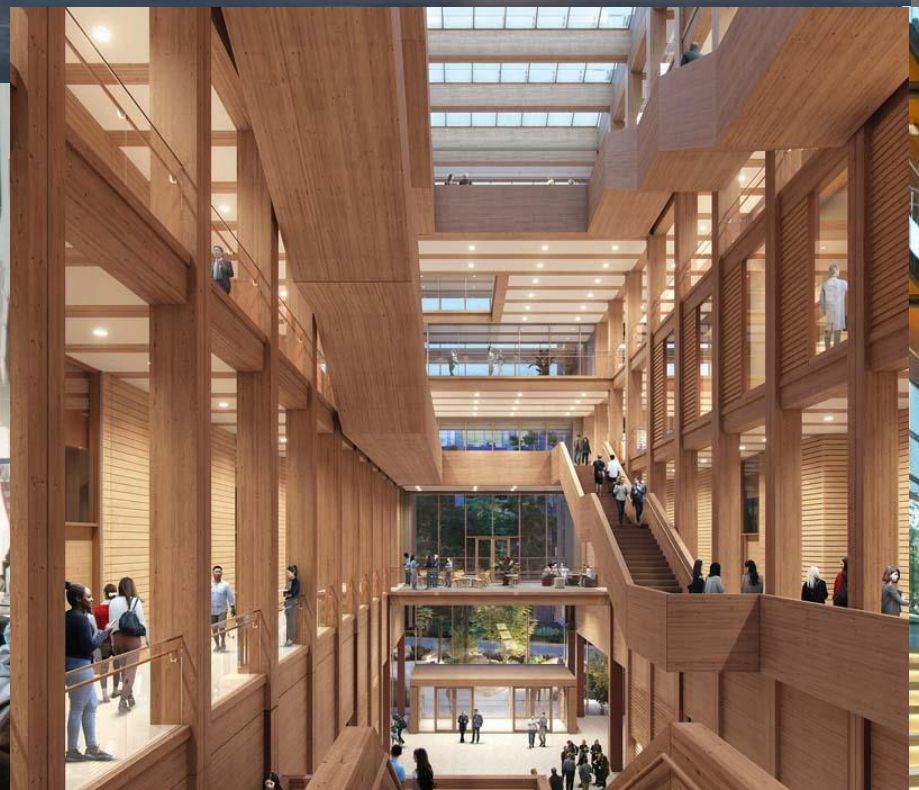

Welcome, O life!
I go to encounter for the millionth time
the reality of experience and to forge
in the smithy of my soul the uncreated
conscience of my race.



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

溫哥華


UBC



THE UNIVERSITY OF BRITISH COLUMBIA

Okanagan Campus

三藩市

聖克拉拉

SANTA CLARA UNIVERSITY
1851

倫敦

多倫多

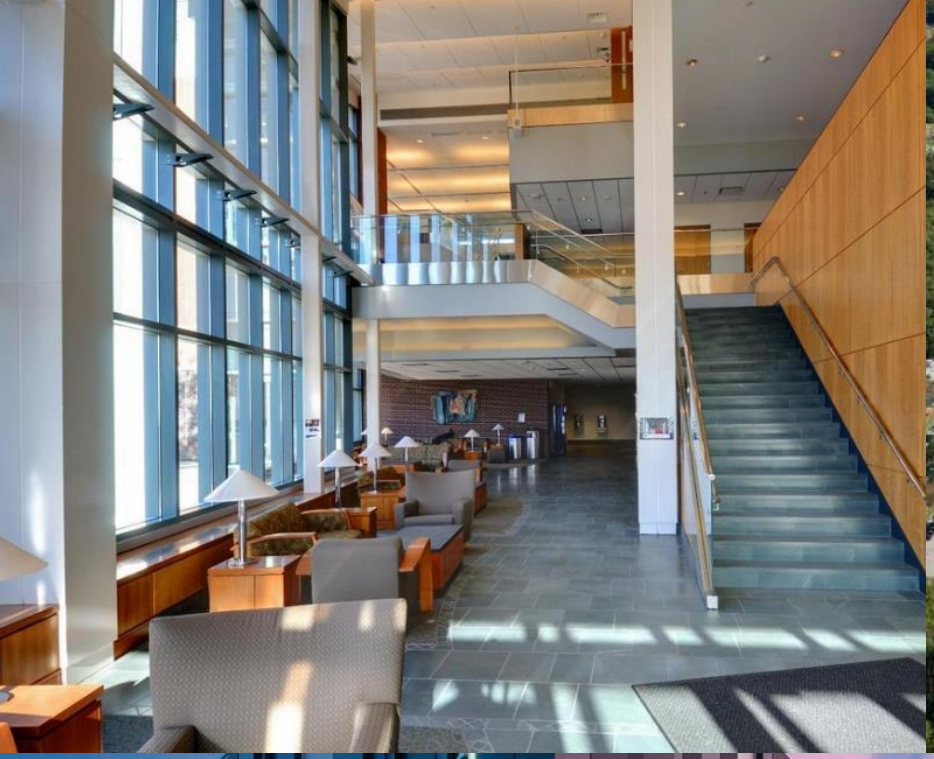

UNIVERSITY of TORONTO


UNIVERSITY OF
TORONTO
SCARBOROUGH


UNIVERSITY OF
TORONTO
SCARBOROUGH

波士頓


BRANDEIS
UNIVERSITY



BENTLEY UNIVERSITY

BABSON
COLLEGE


ALAMOS
MALBEC
MENDOZA · ARGENTINA
Lapostolle


ISF弘立
ISF弘立
ISF弘立
ISF弘立


FIRE

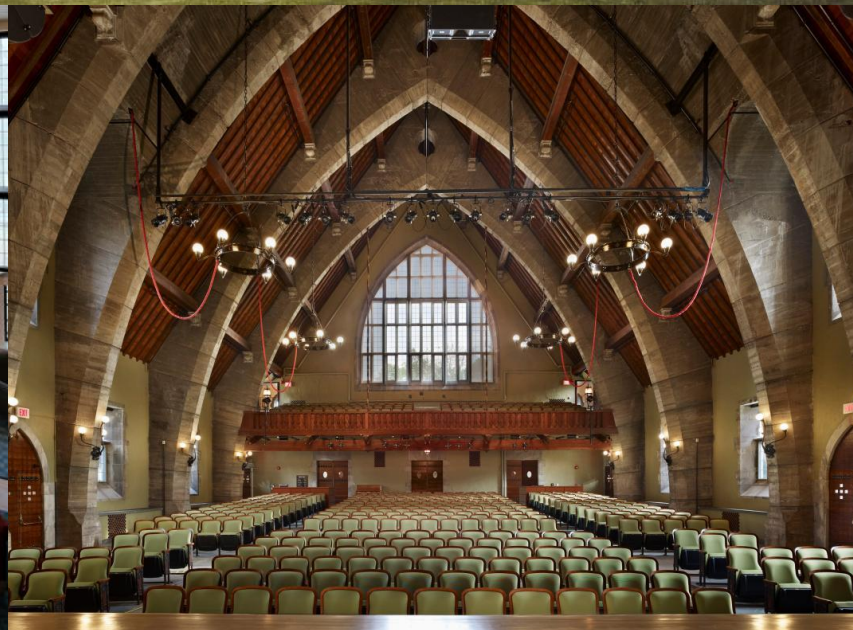
紐約

賓夕凡尼亞州


UNIVERSITY of PENNSYLVANIA

HAVERFORD
COLLEGE

BRYN MAWR COLLEGE



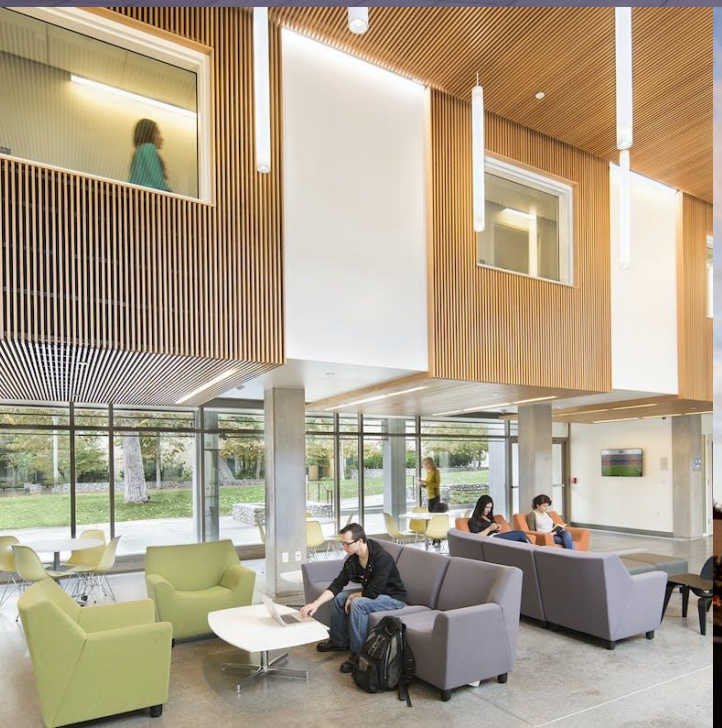
SWARTHMORE

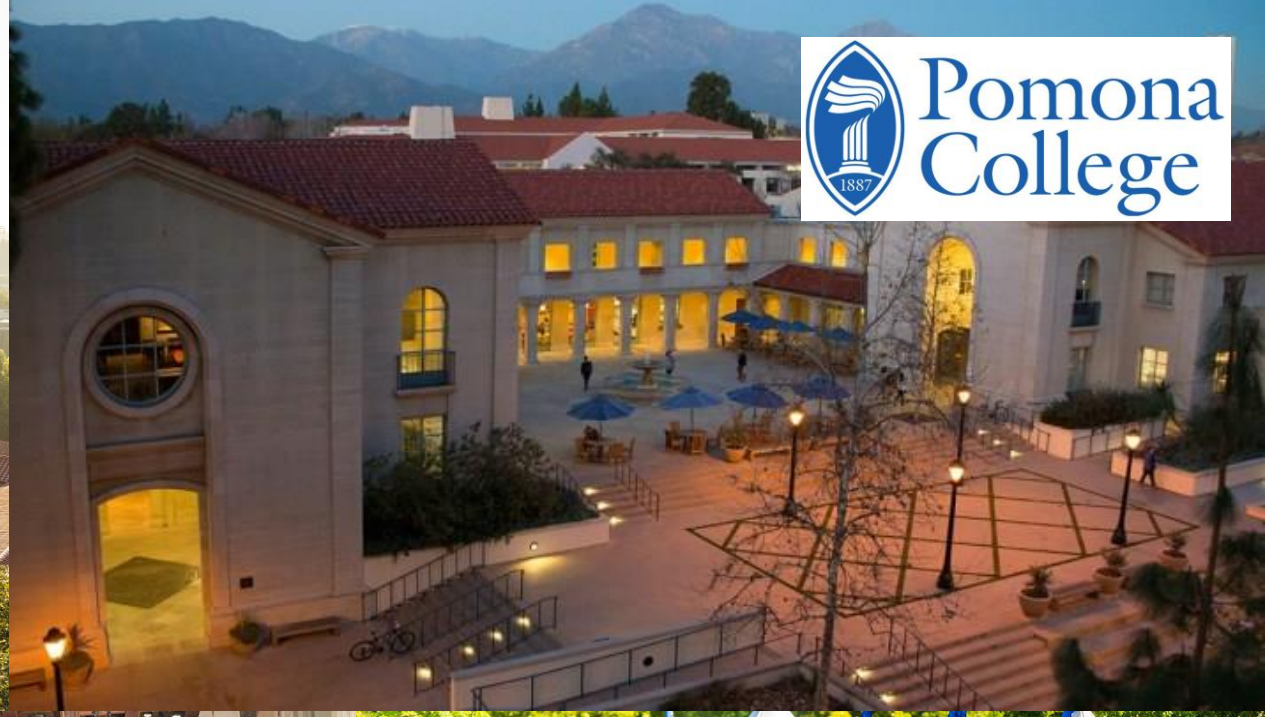
加利福尼亞州


UCLA


USC University of
Southern California

CLAREMONT McKENNA COLLEGE




Pomona
College
1887


NEW STUDENT
CHECK-IN
FAMILY


SCRIPPS
COLLEGE


Story


HARVEY MUDD COLLEGE


WAYNE AND JULIE DRINKWARD
RESIDENCE HALL

UC San Diego

UCI University of California, Irvine

OXY
Occidental College

ISF Primary School Presents 弘立小學部呈獻

TREASURE ISLAND

Written by
Robert Louis Stevenson

Adapted by
Phil Willmott

This amateur production of **"Treasure Island (Willmott)"** is presented by arrangement with Concord Theatricals Ltd. on behalf of Samuel French Ltd.
www.concordtheatricals.co.uk

Date : May 30 and 31, 2024
Time : 6:00p.m.
Venue : C Block Auditorium
Fee : HK$200

20 ISF 弘立

日期：2024年5月30至31日
時間：晚上6時
地點：C大樓劇院
票價：港幣$200元

Ticketing website
購票網頁

DP藝術慶典之夜

2024年 3月14日

下午6:00-8:30 @CKS

弘立書院 *IB Diploma* 學生的
藝術作品、音樂與表演：

陳曉榮｜陳廷瑋｜陳諾言｜周天欣
陳恩筑｜朱浚濠｜龔于晰｜侯懿納
何逸颯｜紀斯雅｜蔣雨馨｜姜彥彤
李世璘｜李嫣然｜雷子熙｜梁嘉雯
連至瑩｜練嘉蘅｜陸宗妤｜馬千惠
苗琪嘉｜吳昭瑜｜石欣甜｜宋心怜
宋藝凡｜宋顥頤｜王語忻｜黃施淇
黃海晴｜胡歷舒｜謝婧妍｜張嘉臨

藝術週

2024年3月11日至15日

Poster created by: Karena Lei

ISF SILENT AUCTION 2024

2024年弘立無聲拍賣

Scan the QR code 掃描二維碼
to make an online bid 進行網上競拍

For enquiries, please contact
如有查詢，請聯繫
info@isfpta.org

ISF 弘立

ISF ACADEMY PTA 弘立書院家長教師會

A silent auction will be running from now until April 12. Some of the auctioned items will be showcased at the PTA Annual Event. All proceeds from the silent auction will be given to support ISF.

March 12 - April 12, 2024
Bidding will close on April 12 at 2:00 p.m.

The winners will be notified by
3:00 p.m. on April 12, 2024

Payment details will be provided by
April 19, 2024

無聲拍賣將由即日起至4月12日舉行。部份拍賣品將在家教會年度活動中展示。無聲拍賣的所有收益將會用作支持弘立書院。

2024年3月12日至4月12日
競拍截止時間為4月12日下午2:00

得標者將於2024年4月12日
下午3:00前收到通知

付款資料將於
2024年4月19日前提供

MAKE A BID, SUPPORT ISF! THANK YOU!
競拍並支持弘立! 謝謝!

**Online payment is not available* 未能支援網上付款服務

2024年度弘立書院家教會家庭服務日

承載感恩、仁愛及文化傳承

日期： 3 月 16 日（星期六）

時間： 上午 9:00 至 11:30

地點： 高鋸廣場

對象： 全校中、小學生及家庭

重點活動：

- 包裝禮物袋，包括快乾毛巾、襪子、冷帽、圍巾、防水墊（禮物袋將透過嘉頤護理院及同路舍贈予一眾長者及無家者）
- 學習製作中國非物質文化遺產 – 可愛動物造型的中國花鈕扣
- 由「書院」老師教授中國書法，為長者和無家者寫下祝福語句

其他精彩活動：

- 由特殊需要畫家親筆肖像素描
- 學生及家長表演
- 烘焙及珍珠奶茶義賣

謝謝！

下次總校長咖啡早會
2024年5月8日(星期三)