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HAPPY COW ICE CREAM: DATA-DRIVEN SALES FORECASTING

I'd definitely say that my method of operating as the CEO is very much about having people go back to the numbers. It's like "this is what you think is going on," but let's go back and see what's happening.

—Mary Schroeder, CEO of Happy Cow

Mary Schroeder, CEO of Hong Kong ice cream maker Happy Cow, was thinking about how best to increase her sales reach. During her three years at the company, Mary, a former distressed debt specialist with experience in the food and beverages sector, had already grown sales from low levels when she bought the company. Founded by two vegans who wanted to produce specialist ice cream for their mostly expatriate friends, Happy Cow ice cream was now found in supermarkets and health stores around the region. However, its customer profile had not changed significantly, and the company still depended on expatriates and overseas-educated Chinese for most of its sales.

In order to expand further, Happy Cow had to increase its market share among local Chinese people. To boost its brand and obtain valuable customer data, Mary decided to open Happy Cow's first retail store on the University of Hong Kong campus, where 80% of customers were locals. It had been seven months since the store opened. Mary was looking at the raw store sales data. She believed that she would be able to use these data to decide on an optimal strategy. She gave Susan Chen, a young intern, the responsibility to analyze the data and develop a plan. The proposal was due in one week. This was Susan's opportunity to impress.

Casual Dining in Hong Kong

Hong Kong was an autonomous territory of the People's Republic of China with a population of 7.3 million, situated on the South China Sea.¹ Under both under British colonial rule and, since 1997, quasi-independent government, it had had a highly international workforce, with

¹ "Summary results of 2016 Population," Government of Hong Kong (2016), <http://www.byccensus2016.gov.hk/en/index.html>, accessed 4 December 2017.

Dr Tim Summers and Xiaofang Cai prepared this case under the supervision of Professor Prasanna Karhade for class discussion. This case is not intended to show effective or ineffective handling of decision or business processes. The authors might have disguised certain information to protect confidentiality. Cases are written in the past tense, this is not meant to imply that all practices, organizations, people, places or fact mentioned in the case no longer occur, exist or apply.

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the major industries being international finance, trading and supporting services, and tourism, particularly from mainland China. The climate was subtropical.

The primary cuisine for Hong Kong residents was Chinese. However, with high exposure to international culture over many decades, its residents' eating habits often followed international trends, so there was nothing unusual about eating a lunchtime meal of dim sum followed by coffee and a Western-style desert. Cantonese traditions such as afternoon tea—a snack in mid-afternoon often accompanied by milky, sweet tea—were still very popular despite decades of international exposure.²

Ice cream sales were moderate in global rankings. Canadean reported that Hong Kong consumption was 3.7 kg/person in 2014, compared with 10.4 for US consumption.^{3,4} Total consumption in mainland China was slightly higher than in the US, with a per capita consumption of approximately 2.4 kg/person.⁵

Happy Cow Ice Cream

A American couple founded Happy Cow in 2013, largely targeting the vegan community.⁶ Its unique feature was that, instead of being dairy-based, the core ingredients were coconut cream and coconut sugar: all products were vegan, kosher, and halal certified. It was initially a micro-company, with recipe development carried out partially in the couple's kitchen, before moving to a small factory in Mongkok for initial manufacturing. Then as the company grew, manufacturing moved to a larger facility in Kwai Chung, Kowloon, in 2015.⁷

Mary Schroeder, who had been in Hong Kong since 2000, had a career as a restructuring consultant and then a distressed debt investor and consultant to hedge and investment funds. She first noticed Happy Cow in 2014. After ordering some ice cream for home delivery, she got to know the founders and their business and made a capital contribution to help them expand to better manufacturing premises. Finally, in 2015, when the founders wanted to exit the business, she took over as owner and full-time CEO.

Mary had a vision of moving Happy Cow from a focus on the (predominately expatriate) vegan community—a niche within a niche—to a more mainstream product focused on healthy living. To that end, she emphasized the distinguishing characteristics of the brand, including being locally made, nondairy, low glycemic, and low cholesterol.⁸ Mary described herself as a “data-driven decision maker.”

Operations remained at the small site in Kwai Chung, which housed raw material, manufacturing, cold storage, and office space for the sales and marketing teams.

² “Cantonese” refers to both the Chinese dialect and traditions local to Hong Kong and the surrounding areas of mainland China.

³ Canadean, “Consumer and Market Insights: Ice Cream Market in Hong Kong,” <https://www.marketresearch.com/product/sample-9053419.pdf>, accessed 11 January 2018.

⁴ International Dairy Foods Association, “Ice Cream Sales & Trends,” <http://www.idfa.org/news-views/media-kits/ice-cream/ice-cream-sales-trends>, accessed 11 January 2018.

⁵ Food Engineering, “China replaces US as fastest growing ice cream market,” <https://www.foodengineeringmag.com/articles/94269-china-replaces-us-as-fastest-growing-ice-cream-market>, accessed 11 January 2018.

⁶ Happy Cow, <http://www.happycowhk.com/>, accessed 4 December 2017.

⁷ Mongkok and Kwai Chung are semi-industrial areas in Kowloon district of Hong Kong.

⁸ Many people of Chinese descent have difficulty metabolizing dairy products. “Low glycemic” means that the impact on blood sugar level is small.

At the start of 2017, Happy Cow was a manufacturer and wholesaler with five types of customers:

| | |
|---------------------------|---|
| Retailers | Medium-sized and large grocers, selling small and medium-sized tubs |
| Health food stores | Specialist health food outlets including vegan and vegetarian shops |
| Movie theaters | Tubs sold in the theater foyer |
| Food and beverage, events | Hotels, receptions, food fairs, etc. |
| Restaurants | Tubs sold as desserts, eaten at the table |

TABLE 1: HAPPY COW'S CUSTOMER TYPES IN EARLY 2017

The largest segment comprised sales through grocery stores such as PARKnSHOP.⁹ Ice cream was sold alongside dairy brands, such as local maker XTC and international companies such as Häagen Daz and Mövenpick. However, Happy Cow was the only packaged dairy-free ice cream available in Hong Kong.

Flavors

Happy Cow maintained about 16 flavors at any one time. These included a small core group of popular flavors such as strawberry, mint chocolate chip, and salted caramel, which were always available, and a larger group such as hazelnut, mango, or ginger, which were more seasonal in popularity and were rotated for availability. Retailers were offered a shopping list of flavors they could stock. Periodically, Mary introduced new flavors, after development and testing by her staff: as winter approached in 2017, Happy Cow rolled out pumpkin fudge and a low-sugar recipe. New flavors were developed by her team of local employees to better reflect local tastes: ginger had previously been introduced as a winter flavor because of the Chinese belief in eating warming foods in cold weather; it had proved very popular.¹⁰ **Exhibit 1** and **Exhibit 2** summarize the effect of the seasons on the body through the “six evils” according to traditional Chinese medicine (TCM).

The noncore flavors were grouped: for instance, fruity flavors (which were popular in summer), warming flavors such as ginger, and nutty. Generally, about one week's inventory of all available flavors was held in storage post-manufacture. The bottleneck in production was the available freezer space in the production facility to store finished products.

Inventory Control System

Like most small businesses, Happy Cow used an inventory control computer system to track the stock of raw materials and deliveries. This was vital not only for the manufacturing operations but also for the sales team, which monitored volumes to individual stores, for instance, to target promotions (typically for stores with flagging sales) or to request additional shelf space (for stores that were performing well).

⁹ PARKnSHOP and its sister company Taste are a chain of middle-market supermarkets in Hong Kong. <http://www.parknshop.com/>, accessed 4 December 2017.

¹⁰ “Why different foods are consumed each season and what are their health benefits?,” Shen-Nong Ltd., http://www.shen-nong.com/eng/lifestyles/food_diet_advice_season.html, accessed 8 December 2017.

Moving into Retail

If you go into retail, just keep in mind it's a marketing arm of your business, and your goal with that is to not lose money.

—Mary Schroeder, CEO of Happy Cow

In March 2017, Happy Cow opened its first retail outlet on the campus of the University of Hong Kong (HKU), one of Asia's most prestigious universities. Its presence on the campus had both advantages and disadvantages. During the teaching term, there was a constant flow of students. After exams, many professors took a break from grading exams to have a snack.

| | |
|--------------------|--|
| Full-time students | 79% from Hong Kong, the rest from mainland China, South Asia, the US, and Europe ¹¹ |
| Staff | Teaching, research, and support |
| Tourists | Hikers, visiting relatives, sightseers |

TABLE 2: HAPPY COW'S RETAIL CUSTOMER TYPES AT THE HKU STORE

At other times, the customer profile changed. Because it was open to the public, there were many foreign tourists, often families with children from mainland China. When the weather was good, the location of the campus, at the edge of a country park and close to popular hiking trails, brought groups of friends, often multigenerational, sometimes with dogs. The university also hosted conferences, for example, the Sakyadhita International Conference for Buddhist women, which drew 800 delegates.¹²

However, the university put constraints on the store operations, for instance, specifying the minimum opening hours that had to be maintained during the teaching term and severely limiting advertising. The university also insisted on a differentiated price structure, with varying prices charged to students, staff, and visitors.

The store was situated on a busy covered walkway connecting two major teaching centers. Along the same walkway was a large Starbucks café, about 10m away, as well as several cafeteria-style Chinese fast-food outlets. Large banners outside advertised the store, sometimes with seasonal promotions.

The storefront had a door and surround of glass about 1.5m wide, with a view into the interior, which had a footprint of about 20m². Internally, the store consisted of a scooping station where cones or cups were manually scooped from five-liter containers, held in a glass-covered freezer compartment. Up to eight flavors could be accommodated at one time. There was also a vertical glass-fronted display freezer holding prefilled mini tubs. In this display freezer, Happy Cow aimed to have the majority of its flavors available at all times. An additional back-store freezer held more supplies for restocking. Seating for about 12 people was provided, on stools around two tables and along a narrow shelf. Decoration was basic but included a three-quarter-size model cow with a simple game, and a piano.

¹¹ University of Hong Kong, "Quick Stats," <https://www.cpaohku.hk/qstats/>, accessed 8 December 2017.

¹² "15th Sakyadhita International Conference," <http://sakyadhita.org/conferences/15th-si-con.html>, accessed 8 December 2017.

Store Manager: Prem

[When a new customer comes in] . . . my first preference is to give them ice cream, even when they don't want to taste. They think vegan, vegetarian thing is not really tasty, so if they taste once, they can feel.

—Prem, HKU store manager

The store manager, Prem, generally worked alone in the store. Prem prided herself on offering customers several choices of flavors and anticipating their preferences. She recognized many regular customers and remembered their favorite flavors, so could often judge whether they might like to try something similar or experiment with a new flavor. She often offered new customers one of the core flavors paired with a less common or new flavor, generally one sweet and one sour. Prem would let them try several with a disposable scoop until they found the one they wanted to order.

She also maintained inventory and was responsible for phoning the distribution staff to order additional produce when supplies were running low. Although delivery was typically only once per week, Prem felt she was often able to anticipate demand through her knowledge of the customers and her experience in accounting for seasonal factors. For the most popular flavors, Prem ensured that the supply would never run out. For the less popular flavors, there were always alternate flavors in the storage freezer, so if one ran out, it could simply be swapped with another.

Vegetarian and vegan diets are unfamiliar concepts to most Asians. Although some customers come to Happy Cow's store because of the health benefits of its recipes, many simply wanted a treat. Prem had spent many years working in vegetarian restaurants and businesses in Hong Kong, and knew that getting customers to try the product was the best way to dispel prejudices about vegan food. By talking to customers, she could also suggest new flavors to try and gather essential feedback.

Point of Sale Data

As in most retail operations, a record was made of each transaction at the point of sale (PoS), with a product code, value, and time stamp. These data were saved for internal use. Any promotions or discounts were recorded, as was the price charged.

Uses of the Retail Store

Mary was clear that the primary function of the HKU retail outlet wasn't a large direct increase in revenues. Instead it was a testing space for new flavors and getting direct feedback from customers: in other words, a laboratory. Getting this feedback was very difficult at a grocer unless there was a promotion with dedicated staff—an expensive and tiring operation.

[I]t's very much about using this as a way to experiment with flavors . . . This gives us the ability to really talk to people, to introduce ice cream sandwiches, to do different things, see what kind of promotion campaigns really resonate, you know. There are a lot of other reasons to do that, so for those things, we are thankful.

—Mary Schroeder, CEO of Happy Cow

Competition

In its locations in grocers, Happy Cow didn't compete on price, refusing to take part in the two-for-one campaigns that many competitors ran each summer. Mary felt that Happy Cow's advantage was not in its price, and that customers would be reasonably loyal:

We're more expensive than anything else really, but they [the customers] are doing it because they have an allergy issue, because they believe in what we're doing, because they want to support a local company or maybe they have a cholesterol issue, or we're able to hit something that's very different from everybody else. So I think on the shelf, that stands out a lot.

—Mary Schroeder, CEO of Happy Cow

At the retail store at HKU, however, Mary realized that many of the customers might share the brand's ideals but "their pockets are just not very deep." If a direct competitor opened nearby, Happy Cow would have no alternative but to match prices.

Competition from other outlets was very difficult to judge. For instance, it was almost impossible to determine how many customers at Starbucks were primarily interested in a sweet dessert rather than a savory meal or just a drink. However, it was noticeable that often there were no customers at the Happy Cow store, but the Starbucks nearby was almost always full.

Promotions and Events

Happy Cow took part in promotional activities. One cross-campaign with Lush was a great success;¹³ another with Zalora was a complete failure.¹⁴ Mary attributed the difference in the outcome to the way that Lush actively integrated with Cantonese society and the alignment of the two company's beliefs, both of which were lacking with Zalora. Lush also was enthusiastic about health-related promotions that had a direct bearing on the sales pitch of the product, for instance, it supplied a conference of allergists at a local hospital with Happy Cow ice cream. Some events, for instance, an open-air event expecting 50,000 visitors in Lan Kwai Fong that lasted from 11 a.m. until midnight, were supported because of the huge number of attendees, despite the high demands on the staff.¹⁵ Other events, such as a three-day open-air rock music festival, were not supported due to the economics and the lack of alignment with target customers.

Expanding the Retail Operations

Happy Cow was preparing to open two new retail operations at the start of 2018, located in the New Territories areas of Yuen Long and Tsuen Mun.¹⁶ Close to the mainland boarder, these were mixed-level residential districts with a high level of social housing and a relatively long commute from the expensive areas of Central and Tsim Sha Tsui. The stores would have the same footprint and design as the HKU store, and would be set within food courts operated by the supermarket Taste. A third store, located on the iconic Hong Kong harbor front in Central, opened in late 2017, and Prem, the store manager, moved there to manage sales.

¹³ Lush is an international group of cosmetics and bathing products. See <https://hk.lush.com/>, accessed 5 December 2017.

¹⁴ Zalora is an international on-line seller of fashion. See <https://www.zalora.com.hk>, accessed 5 December 2017.

¹⁵ Lan Kwai Fong is a bar, restaurant, and entertainment area, close to Central on Hong Kong Island.

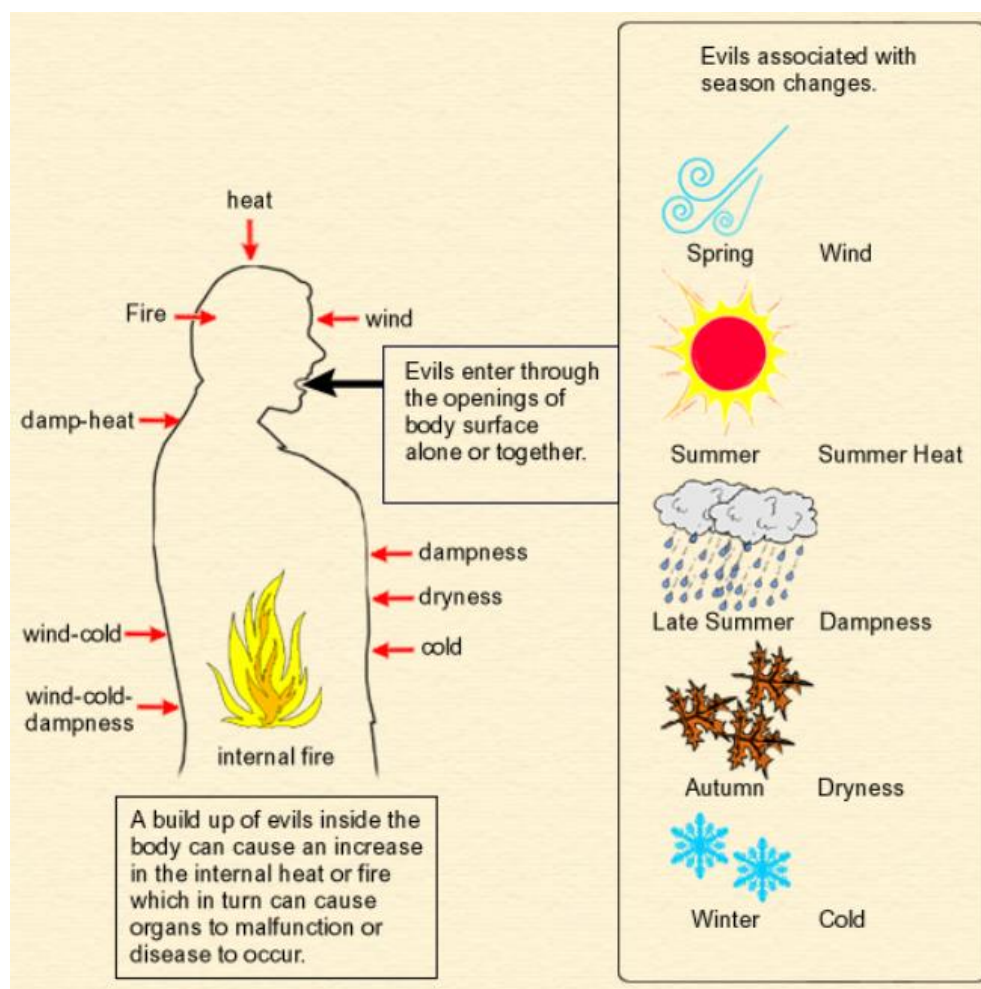
¹⁶ The New Territories are outlying areas of Hong Kong close to the mainland boarder.

Susan Chen's Assignment

Mary wanted suggestions for how to expand Happy Cow's sales. Being a small company with large competitors, Happy Cow had little room for mistakes. She asked the intern Susan to suggest some new promotional initiatives.

Susan was a good representative of the target demographic and had many ideas. She enthusiastically accepted the challenge, but understood any suggestions would have to be backed by data-based arguments. Despite having only seven months' data rather than a year or more, the business could not afford to wait. An imperfect answer was better than none.

What actions could she suggest to Mary that would appeal to her business experience as well as her data-driven mind-set?

EXHIBIT 1: THE SIX CLIMATIC EVILS IN TRADITIONAL CHINESE MEDICINE¹⁷**EXHIBIT 2: THE SIX EVILS RELATED TO CLIMATE AND SEASONS**

| Evil | Element | Season |
|-------------|---------|-------------|
| Wind | Wood | Spring |
| Cold | Water | Winter |
| Summer-heat | Fire | Summer |
| Dampness | Earth | Late Summer |
| Dryness | Metal | Autumn |

¹⁷ "What are the six evils?," Shen-Nong Ltd., <http://www.shen-nong.com/eng/principles/whatsixevils.html> , accessed 8 December 2017.

EXHIBIT 3: THE HAPPY COW STORE AT HKU. CAMPUS STOREFRONT;
PROMOTIONAL POSTER; SCOOPING STATION; PRICE LIST



EXHIBIT 4: TEACHING CALENDAR AT UNIVERSITY OF HONG KONG

| THE UNIVERSITY OF HONG KONG | | | | | | | 234/714 amended |
|---|-----|------|------|------|------|------|-----------------|
| Calendar for the Academic Year 2017-2018 | | | | | | | |
| (for undergraduate and taught postgraduate students*) | | | | | | | |
| | SUN | MON | TUE | WED | THUR | FRI | SAT |
| FIRST SEMESTER: SEP 1 - DEC 23, 2017 | | | | | | | Week |
| First Day of Teaching: Sep 1, 2017 | | | | | | | 1 |
| SEP-17 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | | | | | | | |
| OCT-17 | 1 | [2] | 3 | 4 | [5] | 6 | 7 |
| | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 15 | [16] | [17] | [18] | [19] | [20] | [21] |
| | 22 | 23 | 24 | 25 | 26 | 27 | [28] |
| | 29 | 30 | 31 | | | | |
| Reading/ Field Trip Week: Oct 16 - 21, 2017 | | | | | | | 7(Reading) |
| NOV-17 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | |
| Last Day of Teaching: Nov 30, 2017 | | | | | | | 11 |
| DEC-17 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | 24 | [25] | [26] | 27 | 28 | 29 | 30 |
| | 31 | | | | | | |
| Revision Period: Dec 1 - 7, 2017 | | | | | | | 14(Revision) |
| Assessment Period: Dec 8 - 23, 2017 | | | | | | | 1 |
| JAN-18 | 7 | [1] | 2 | 3 | 4 | 5 | 6 |
| | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| | 28 | 29 | 30 | 31 | | | |
| | | | | | | | |
| Second Semester: Jan 15 - May 26, 2018 | | | | | | | Break |
| First Day of Teaching: Jan 15, 2018 | | | | | | | Break |
| FEB-18 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | 11 | 12 | 13 | 14 | <15> | (16) | (17) |
| | 18 | (19) | 20 | 21 | 22 | 23 | 24 |
| | 25 | 26 | 27 | 28 | | | |
| | | | | | | | |
| Class Suspension Period for the Lunar New Year: Feb 16 - 22, 2018 | | | | | | | 4 |
| MAR-18 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | 11 | 12 | 13 | 14 | 15 | (16) | 17 |
| | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | 25 | 26 | 27 | 28 | 29 | (30) | (31) |
| | | | | | | | |
| Reading/ Field Trip Week: Mar 5 - 10, 2018 | | | | | | | 7(Reading) |
| APR-18 | 1 | [2] | 3 | 4 | [5] | 6 | 7 |
| | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | 29 | 30 | | | | | |
| Last Day of Teaching: Apr 28, 2018 | | | | | | | 14 |
| MAY-18 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | 20 | 21 | [22] | 23 | 24 | 25 | 26 |
| | 27 | 28 | 29 | 30 | 31 | | |
| | | | | | | | |
| Revision Period: Apr 30 - May 5, 2018 | | | | | | | 15(Revision) |
| Assessment Period: May 7 - 26, 2018 | | | | | | | 1 |
| JUN-18 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | 17 | [18] | 19 | 20 | 21 | 22 | 23 |
| | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | | | | | | | |
| Optional Summer Semester: Jun 25 - Aug 18, 2018 | | | | | | | Break |
| JUL-18 | 1 | [2] | 3 | 4 | 5 | 6 | 7 |
| | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | 29 | 30 | 31 | | | | |
| AUG-18 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | 26 | 27 | 28 | 29 | 30 | 31 | |
| | | | | | | | |
| | | | | | | | 7 |
| | | | | | | | 8 |

| | |
|--|--|
| [] General Holiday | [] Reading/ Field Trip Week |
| [] University Holiday (Full Day) | [] Revision Period |
| <> University Holiday (afternoon only) | [] Class Suspension Period for the Lunar New Year |
| | [] Assessment Period |

Notes:

* Applicable to non-clinical undergraduate and taught postgraduate curricula in general and subject to Faculties' confirmation of the first and last days of teaching, reading/field trip weeks (if any), revision periods, and assessment periods for individual curricula as approved by the respective Boards of Faculties.

Public holidays subject to Government confirmation.