

# Information Session II: CHEM Options and Capstone

(For Student Cohort of 2014/15)

Date: Feb 16<sup>th</sup>, 2017

Time: 16:15 pm

Venue: Rm 1103

# Chemistry Options

# Suggested Study Pathway for B.Sc. in Chemistry (*with* an Option)

## Year 1

*Fall (12):*

Gen. Chem. I (2)  
Gen. Chem. Lab I (1)  
Calculus I (3)  
Science (3)  
Eng. (3)

*Spring (16):*

Gen. Chem. II (3)  
Gen. Chem. Lab II (1)  
Calculus II (3)  
Eng. (3)  
U core (3)  
Science (3)

## Year 2

*Fall (17):*

Org. I (3)  
Org. Lab (1)  
Inorg. I (3)  
Inorg. Lab (1)  
Math (3)  
U core (3)  
Eng. (3)

*Spring (17):*

Org. II (3)  
Inorg. II (3)  
Syn Lab (2)  
Computer (3)  
U. Core (6)

## Year 3

*Fall (17):*

Fund. An. Chem. (3)  
P. Chem. I (3)  
An. Chem. Lab (1)  
P. Chem. Lab (1)  
Science (3)  
U core (6)

*Spring (15):*

Inst. Analysis (3)  
P. Chem. II (3)  
MC Lab (2)  
Eng. (1)  
U core (3)  
Opt. Chem Elective (3)

## Year 4

*Fall (13):*

Capstone (3)  
Eng (2)  
U core (3)  
Opt. Adv. lab (1)  
Opt. Adv. Lab (1)  
Opt. Chem Elective (3)

*Spring (12):*

U core (3)  
U core (3)  
Opt. Chem Elective (3)  
Opt. Chem Elective (3)

**Instructor's Approval  
required**



**Total: 121 credits**

# How to get into a CHEM Option?

□ In Mid-August, 2017 (Course Registration Period for Fall)

You **MUST** submit *Course Enrollment Requests via SIS* for the corresponding **Option Lab courses**:

- *Pure CHEM Option*: CHEM 4550 and 4555
- *Biomolecular Option*: CHEM 4150 and 4155
- *Materials Option*: CHEM 4250 and 4255
- *Env. & An. Option*: CHEM 4350 and 4355

- Depending on lab capacity, students might be selected based on their GPA ranking.
- **Successful enrollment into the lab courses means you are eligible to fulfill that Option.**
- For the other **CHEM Elective courses**, you need to register them by yourself.
- A **Preliminary survey** will be conducted in **MC Lab in April** for estimated enrollment figures.

# Capstone Project

# CHEM Capstone Courses

- ALL CHEM students (*w or w/o Options*) may choose:

1) CHEM 4689\* - Capstone Project

OR

2) CHEM 4691\* - Capstone Research I

*\*Language Co-requisite course: LANG 4012*

# CHEM 4689 – Capstone *Project*

- Offered in **Fall and Spring** only
- **Instructor's approval** needed prior to course enrollment.
- Randomly assigned supervisor and enrollment semester.
- **Course Requirements:**
  - (i) Library Workshops (research database, referencing)
  - (ii) Consultation Sessions
  - (iii) Literature Review Report
  - (iv) Oral Presentation
  - (v) Poster Presentation

# CHEM 4691 – Capstone *Research I*

- Offered in **Fall, Spring, and Summer.**
- Conducted in a **Research lab** under the guidance of a **research faculty supervisor.**
- Declaration of your preferred choice(s) of research supervisors.
- **Course Requirements (*tentative only*):**

9 hrs per week
Lab Participation <b>(50%)</b>
Research Thesis <b>(30%)</b>
Oral Presentation <b>(20%)</b>



# Timeline for Selection of Capstone Projects

## Feb - March 2017:

If you plan to take CHEM 4691 – Capstone Research I:

- ❑ Browse our Departmental Website for the research areas of our faculties.
- ❑ Meet with target faculties to learn more about their current research projects.
- ❑ Complete *On-line Lab Safety Training and Exam from HSEO (see next slides)*:
  - ❑ Go to HSEO website: <http://www.ab.ust.hk/hseo/sub-menu/training.htm>
    - ❑ *MC03 – Chemical Safety II*
    - ❑ *MC07 – Chemical Safety I*
  - ❑ *Send Request to HSEO to arrange for a safety exam.*
  - ❑ *Complete the Pre-Class Assignment before exam and submit to HSEO staff on the exam date (download from the Chemistry Departmental Website).*
  - ❑ *Obtain your HSEO Safety Certificates from Ms. Amy Ho in the Chemistry General Office (available 2 – 3 weeks after exam and you will receive e-mail notification for pick-up. For enquiries, please approach Ms. Amy Ho by e-mail: [chamyho@ust.hk](mailto:chamyho@ust.hk))*

Go to HSEO Website: <http://www.ab.ust.hk/hseo/sub-menu/training.htm>

Health, Safety & Environ: X

www.ab.ust.hk/hseo/sub-menu/training.htm

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HKUST 香港科技大學

A&B Health, Safety and Environment Office

A&B Portal Administrative Intranet Home

About Us  
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Safety Training  
Env. Protection  
Hazardous Waste  
Publications  
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HSEO Lab.  
Safety Links  
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### Safety Training

**Training Course Information and Registration:**

- ▷ Safety Training Courses Description
- ▷ Schedules of Available Courses

**On-line Safety Training Materials:**

- ✿ **Self-learning Training Programs (Mandatory - assessments by HSEO required)**
- ✿ ~~Other on-line Training Materials:~~

- ▷ Safety Orientation Information
- ▷ Emergency Medical Response to HF and Cyanide Exposure (powerpoint presentation)
- ▷ Guidelines on setting up and working at a proper computer workstation
- ▷ Back Care Basics (Manual Handling Operation Safety)
- ▷ Seminar on Prevention of Avian Flu (28 February 2006)
- ▷ Talks on Indoor air quality and health held on 30 November 2004 (for internal only)
- ▷ Safety, Health & Environmental Protection General Interest Lectures held on 16 March 2004 (For internal only)

**Safety Video**

- ▷ Campus Safety Orientation
- ▷ Fire Drills



## Select and Complete Online Self-learning Courses [MC03] and [MC07]

### Training Courses:

[Click on the course name to select the course]

If you have problems or comments concerning the self-learning programs, please contact Ms. Doris Li at 7229 or email at [communal@ust.hk](mailto:communal@ust.hk)

	Course Name	Text	Narration	Content Format
<a href="#">MC01</a>	<a href="#">Radiation Safety for Unsealed Sources</a>	Chinese	Putonghua	Text/Pictures (Powerpoint slides)
<a href="#">MC01</a>	<a href="#">Radiation Safety for Unsealed Sources</a>	English	English	Text/Pictures/Narration
<a href="#">MC02</a>	<a href="#">Radiation Safety for Sealed Sources</a>	English	No	Text/Pictures (Powerpoint slides)
<a href="#">MC03</a>	<a href="#">Chemical Safety II</a> (Formerly "Hazardous Waste Management")	English	English	Taped Presentation
	<a href="#">Chemical Safety II</a> - in Putonghua [Updated in July 09]	English	Putonghua	Taped Presentation
<a href="#">MC04</a>	<a href="#">Laser Safety</a> - in Putonghua	Chinese	Putonghua	Text/Pictures/Video/Narration
<a href="#">MC04</a>	<a href="#">Laser Safety</a>	English	English	Text/Pictures/Video/Narration
<a href="#">MC05</a>	<a href="#">Pressure Safety</a>	English	English	Text/Pictures/Video/Narration
<a href="#">MC06</a>	<a href="#">Biological Safety</a>	English	English	Taped Presentation
	<a href="#">Biological Safety</a> - in Putonghua [Updated in July 09]	English	Putonghua	Taped Presentation
<a href="#">MC07</a>	<a href="#">Chemical Safety I</a>	English	English	Taped Presentation
	<a href="#">Chemical Safety I</a> - in Putonghua [Updated in July 09]	English	Putonghua	Taped Presentation
<a href="#">MC09</a>	<a href="#">Respiratory Protection</a>	English	No	Text/Pictures
<a href="#">MC09</a>	<a href="#">Respiratory Protection</a>	Chinese	No	Text/Pictures
<a href="#">DC04</a>	<a href="#">Electrical Safety</a>	English	No	Text/Pictures/Video
<a href="#">DC04</a>	<a href="#">Electrical Safety</a>	Chinese	No	Text/Pictures/Video
<a href="#">DC14</a>	<a href="#">Chemical Safety for NFF</a>	English	English	Text/Pictures/Video/Narration

**Notice:** If you have completed one of the Self-Learning programs, you may click the button below to send a request to HSEO to arrange for an assessment.

[Please Click Here to  
SEND REQUEST](#)

# Send Requests for Safety Exams

## Training Courses:

[Click on the course name to select the course]

If you have problems or comments concerning the self-learning programs, please contact Ms. Doris Li at 7229 or email at [communal@ust.hk](mailto:communal@ust.hk)

	Course Name	Text	Narration	Content Format
<a href="#">MC01</a>	<a href="#">Radiation Safety for Unsealed Sources</a>	Chinese	Putonghua	Text/Pictures (Powerpoint slides)
<a href="#">MC01</a>	<a href="#">Radiation Safety for Unsealed Sources</a>	English	English	Text/Pictures/Narration
<a href="#">MC02</a>	<a href="#">Radiation Safety for Sealed Sources</a>	English	No	Text/Pictures (Powerpoint slides)
<a href="#">MC03</a>	<a href="#">Chemical Safety II</a> (Formerly "Hazardous Waste Management")	English	English	Taped Presentation
	<a href="#">Chemical Safety II</a> - in Putonghua [Updated in July 09]	English	Putonghua	Taped Presentation
<a href="#">MC04</a>	<a href="#">Laser Safety</a> - in Putonghua	Chinese	Putonghua	Text/Pictures/Video/Narration
<a href="#">MC04</a>	<a href="#">Laser Safety</a>	English	English	Text/Pictures/Video/Narration
<a href="#">MC05</a>	<a href="#">Pressure Safety</a>	English	English	Text/Pictures/Video/Narration
<a href="#">MC06</a>	<a href="#">Biological Safety</a>	English	English	Taped Presentation
	<a href="#">Biological Safety</a> - in Putonghua [Updated in July 09]	English	Putonghua	Taped Presentation
<a href="#">MC07</a>	<a href="#">Chemical Safety I</a>	English	English	Taped Presentation
	<a href="#">Chemical Safety I</a> - in Putonghua [Updated in July 09]	English	Putonghua	Taped Presentation
<a href="#">MC09</a>	<a href="#">Respiratory Protection</a>	English	No	Text/Pictures
<a href="#">MC09</a>	<a href="#">Respiratory Protection</a>	Chinese	No	Text/Pictures
<a href="#">DC04</a>	<a href="#">Electrical Safety</a>	English	No	Text/Pictures/Video
<a href="#">DC04</a>	<a href="#">Electrical Safety</a>	Chinese	No	Text/Pictures/Video
<a href="#">DC14</a>	<a href="#">Chemical Safety for NFF</a>	English	English	Text/Pictures/Video/Narration

**Notice:** If you have completed one of the Self-Learning programs, you may click the button below to send a request to HSEO to arrange for an assessment.





## Request for Assessment (for online Self-learning Courses)

Please complete all fields.

Last Name (Surname):

First Name:

Student/Staff ID:

Department:

HKUST E-mail:

Phone No.:

Subject:

Note: You can only submit

--Please select subject--  
--Please select subject--  
MC 01 Radiation Safety with Unsealed Radioactive Materials  
MC 02 Radiation Safety with Sealed Radioactive Materials and Irradiating Apparatus  
MC 03 Chemical Safety II  
MC 04 Laser Safety  
MC 05 Pressure Safety  
MC 06 Biological Safety  
MC 07 Chemical Safety I  
MC 09 Respiratory Protection  
DC 04 Electrical Safety

press the back button, select the subject and submit again.

Submit

Reset

- You need to send TWO individual requests, one for each course [MC03] and [MC07].
- **E-mail notification** on exam time and venue (normally, exams will be held on Friday mornings)
- Complete **Pre-class Assignment** (see next) before the exam and submit to HSEO staff on the day of exam.
- Safety Certificates will be processed in **2-3 weeks**. Receive **e-mail notification** for pick up from Ms. Amy Ho in Chem General Office (for enquiries, please approach Ms. Amy Ho by e-mail: [chamyho@ust.hk](mailto:chamyho@ust.hk)).

• **Chemical Safety for Laboratory Users**• **Pre-class Assignment**

- Select ONE chemical that you will frequently use. Write down the name of the chemical, and how it is used in your work.
- Get a container of the selected chemical, read the label, and answer the following questions:
  1. What are the major hazards of this chemical (e.g. flammable, toxic, corrosive...etc)?
  2. What other specific warnings are found on the container?
- On a campus computer, go to the *Library webpage*, under *Databases*, search for *MSDS*, find the chemical you selected in either one of the *Material Safety and Data Sheet (MSDS)* databases. Then, answer the following questions:
  1. List the synonyms of this chemical (see Section 1 or 2).
  2. What are the major hazards according to the MSDS (Sect 3)?
  3. What are the first aid measures for inhalation or skin contact (Sect 4)?
  4. If the chemical is identified as "flammable", list the flash point, lower explosive limit (LEL) and upper explosive limit (UEL) (Sect 5).
  5. List three things you should do in case of a spill of this chemical (Sect 6).
  6. What are the occupational exposure limits (Sect 8 or 15)?
  7. What personal protective equipment is recommended for handling this chemical (Sect 8)?
  8. List three of the toxicity data for this chemical (Sect 11).
- The "Instant Gloves + CPC database" is located at a Reference Standalone computer on G/F, (floor plan: [http://lbcone.ust.hk/floorplans/floor/view?name=gf&place\\_id=210](http://lbcone.ust.hk/floorplans/floor/view?name=gf&place_id=210)); Access *Instant Glove + CPC Database*, and find a glove material that suits the chemical you selected. Record the breakthrough time for the chemical to penetrate the glove material.

*Please bring the completed assignment sheet to the class. This is one of the requirements to pass the Chemical Safety Training. If you have any questions about this assignment, please contact Mr Pak Ip at Ext 6538 or email [sepopcip@ust.hk](mailto:sepopcip@ust.hk)*

**IMPORTANT NOTE:**

- **Pre-class Assignment** must be completed before the exam, and submit it to HSEO staff on exam day.
- **Download the assignment from Chemistry Departmental Website**



The Hong Kong University of Science and Technology  
Health, Safety and Environment Office

*This is to certify that*

**CHAN Tai Man**

*has successfully completed a course in*

**Chemical Safety I**

*on*

2015/02/10

*Joseph K. Kwan*

Director of Health, Safety and Environment



**\*attach photocopies of your safety certificates to your Capstone Selection Form**



The Hong Kong University of Science and Technology  
Health, Safety and Environment Office

*This is to certify that*

**CHAN Tai Man**

*has successfully completed a course in*

**Chemical Safety II**

*on*

2015/02/26

*Joseph K. Kwan*

Director of Health, Safety and Environment



**\*attach photocopies of your safety certificates to your Capstone Selection Form**



# Timeline for Selection of Capstone Projects



**Feb - March 2017: Safety Courses and Exams (CHEM 4691 only)**

**April 13<sup>th</sup>:** deadline for submission of **Capstone Projects/Supervisors Selection Form** (see next).

**Put down 5 choices:** CHEM 4691 with names of research faculty, or CHEM 4689

**Important:** Attach photocopies of your HSEO Safety Certificates (for CHEM 4691 only)



The Hong Kong University of Science and Technology  
Department of Chemistry

Form for Selection of Capstone Projects/Supervisors for Students in the B.Sc. Chemistry Program (B4201)

This form is to be completed by **ALL current Year-3 students** in academic year 2016-17.

I. **Student Particulars**

Student Name	UST Email
Student No.	Mobile Phone No.

To fulfill the Chemistry degree requirement, students of the 2014-15 cohort may choose from:  
CHEM4689 - 'Capstone Project' (offered in Fall and Spring terms only).

OR

CHEM4691 - 'Capstone Research I' (conducted in a Research Laboratory under the supervision of a research faculty member) (offered in Summer, Fall, and Spring terms).

Please **LIST YOUR TOP FIVE CHOICES** of Capstone Courses and Supervisors in the table below:

IMPORTANT NOTES for CHEM 4691 only:

- Each Research Faculty Supervisor can only be ranked ONCE (i.e., can only appear once).
- Please indicate your preferred enrollment term (if any) and provide a justification. We will try our best to accommodate your preference, but no guarantee.

Choice	CHEM 4689 OR CHEM 4691	Research Faculty Supervisor's Name (for CHEM 4691 only)
1 <sup>st</sup> Choice <i>(most preferred)</i>		
2 <sup>nd</sup> Choice		
3 <sup>rd</sup> Choice		
4 <sup>th</sup> Choice		
5 <sup>th</sup> Choice		
Preferred Enrollment Term (if any) for CHEM 4691 only:		
Justification for preferred term:		

II. This part is to be completed by students opting for **CHEM 4691 only**:

**Mandatory Safety Courses for Taking CHEM4691 'Capstone Research I'**

In compliance with University Safety Regulations, students who wish to choose CHEM4691 'Capstone Research I' MUST attend and pass in advance TWO Mandatory Online Safety Courses offered by the Health, Safety and Environment Office (HSEO). You are required to **attach photocopies of your Safety Certificates\*** along with this Capstone Declaration Form before submission. For online safety courses and exam requests, please visit the following link: <http://www.ust.hk/hseo/sub-menu/training.htm>. Detailed instructions can be obtained from the Information Session Slides (Feb 2017) on our Chemistry Departmental Website.

The TWO Mandatory Safety Courses are:

- Chemical Safety I / Chemical Safety for Laboratory Users (MC07)
- Chemical Safety II / Hazardous Waste Management (MC03)

- Important Note: a **Pre-Class Assignment** must be completed before the Safety Examination day (available from Chemistry Departmental Website).

Please indicate the examination dates of your Safety Exams below:

Safety Course Code	Examination Date
MC07	
MC03	

\* HSEO will send Safety Courses Certificates to the Department of Chemistry after 2 – 3 weeks from the date of examination. You will receive an e-mail notification from Ms. Amy Ho of Chemistry Administration Office when your certificates are ready for pick-up. Please bring along this declaration form (your **Examination Dates** must be clearly shown) when you pick up your certificates. For inquiries, please approach Ms. Amy Ho of Chemistry Administration Office by email: [chamyho@ust.hk](mailto:chamyho@ust.hk).

Please **return the completed Capstone Declaration Form (with photocopies of Safety Certificates if choosing CHEM4691) in person** to Ms. Vera Tang of Chemistry Administration Office **by Thursday, 13 April 2017** \*\*\*.

# Timeline for Selection of Capstone Projects



**Feb - March 2017: Safety Courses and Exam (for CHEM 4691 only)**

**April 13<sup>th</sup>: Deadline for Declaration Form**

**Late May 2017: Announcement of Results**

*Depending on availability, the earliest term to enroll into CHEM 4691 is Summer 2017.*

(Note: **CHEM 4691** is offered in **Summer, Fall & Spring**  
**CHEM 4689** is offered in **Fall & Spring** only.)

# Further Information

- Dr. Emily Tsang, UG Coordinator  
e-mail: [chetsang@ust.hk](mailto:chetsang@ust.hk)
- Prof. Wa-Hung Leung, Deputy UG coordinator  
e-mail: [chleung@ust.hk](mailto:chleung@ust.hk)
- Ms. Vera Tang, Chemistry General Office (UG matters)  
e-mail: [chvera@ust.hk](mailto:chvera@ust.hk)
- Ms. Amy Ho (Lab Safety Course and Certificate Enquiry)  
e-mail: [chamyho@ust.hk](mailto:chamyho@ust.hk)

Q&A