

Welcome to the First-Year Physics Students at Carleton!

Physics Department
www.physics.carleton.ca

Welcome Academic Orientation 2024

Orientation Department of Physics

- Video from Dean of Faculty of Science
- Welcome to the Carleton Physics Programs
- Contacts
- Registration Advice
- Program and Course Issues
- People
- Your Physics Society....

Welcome Video Dean of Science

<https://www.youtube.com/watch?v=89e3RmEZ8yo>

Welcome to Carleton Physics Programs

- B.Sc. Honour
 - Applied Physics
 - Physics – Experimental
 - Physics – Theory
 - Physics – Astrophysics
 - Biology and Physics – Combined
 - Chemistry and Physics – Combined
 - Mathematics and Physics - Double
- B. Eng.
 - Engineering Physics
- B.Sc. Major in Physics
- B.Sc. in Physics (15 credits)
- Minor in Physics

People to know

- Associate Chair for Undergraduate Studies:

➤ advise, orientation, career, course description

Prof. Alain Bellerive

undergrad-advisor@physics.carleton.ca

520-2600 x 7537

Herzberg 3316

- Undergraduate Program Administrator:

➤ audit, course override, scheduling, equivalence

Joanne Martin

joanne_martin@carleton.ca

520-2600 x 1023

Herzberg 3302

People to know

- Chair:
 - Prof. Kevin Graham
physchair@physics.carleton.ca
 - 520-2600 x 4371
 - Herzberg 3322
- Physics Society:
 - *Update* (president)
 - facebook.com/CUPhysSoc/
 - <https://twitter.com/cuphyssoc?lang=en>
 - physsoc@physics.carleton.ca

Registration Advice: Physics courses

By default, You should be registered in

PHYS 1001/1002

PHYS 1001: Fall

PHYS 1002: Winter

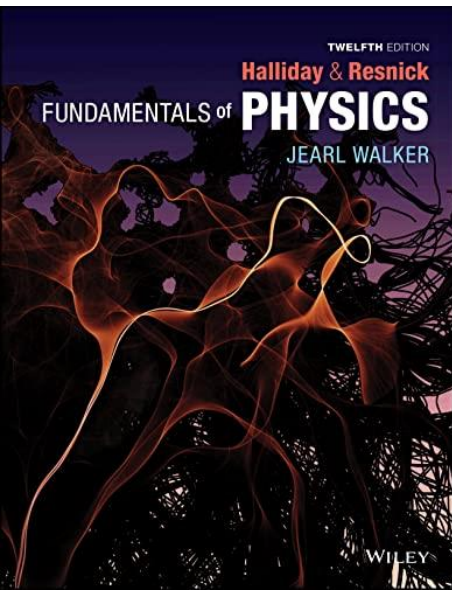
- **No Grade 12 Calculus?**

Register in PHYS 1007 + PHYS 1008

(but you have to get a B- or better to continue in Physics)

If you get B- in PHYS 1007 in the fall

You can switch to PHYS 1002 in the winter



Book: At the Carleton book store

- Halliday Resnick for PHYS1001/1002 (textbook):
- **Fundamentals of Physics, 12th Edition, Halliday, Resnick & Walker, John Wiley & Sons Canada Ltd.**
- Vol 1 for 1001 and Vol 2 for 1002.

Lab Material: All labs will be in person this year.

Instructors: PHYS 1001 Dr. Wafia Bensalem

PHYS 1002 Prof. Sangeeta Murugkar

More Registration Advice: Math courses

You should also be registered in

- MATH 1004(fall), MATH 1005 (winter) and MATH 1104 (fall or winter)

(except those in **Math-Phys** program need to take MATH 1052, 1102 and 1800)

More Registration Advice: Science Elective

- Most programs require 1 credit with a laboratory component in BIOL or CHEM or EARTH. This is the Science elective and it is required for all students in Science during their FIRST year
- BIOL 1103/1104
- CHEM 1001/1002
(or CHEM 1011/1012 in Chem/Phys)
- EARTH 1006/1009

More Registration Advice: Computer courses

- Most physics programs require COMP 1005.

Default: COMP 1005, 1006, 2401 (suggested)

The ECOR options present in many of the program calendar descriptions don't exist anymore.

Program and Course issues

First Year (an example) = basic rule 10 courses

- Physics: PHYS 1001 and 1002 ***
- Mathematics: MATH 1004, 1005, and 1104
- Computer Science: COMP 1005/1006
- Experimental Science: either
 - 1.0 credit from CHEM 1001 and 1002 or CHEM1011 and 1012
 - 1.0 credit from BIOL 1103 and 1104
 - 1.0 credit from EARTH 1006 and 1009
- NSCI 1000 **or** 0.5 approved course outside science or engineering
- 0.5 approved approved course outside science or engineering (if needed)

Summary: 10 courses or 5.0 credits per year: five course per term

TOTAL: 20.0 credits per degree

[Math/Phys 21.5 credits – require some term overload]

There is some freedom in how you organize your schedule. For example, you might decide to take less than 5 courses per term.

- PHYS and MATH courses are the first **priority**
 - Due to the pre-requisite structure.
- Many courses are offered also in summer:
 - First year MATH
 - First year BIOL, CHEM, EARTH, COMP
 - PHYS:1007/1008/1004/3606
 - Many Arts , Social science & Business courses

Program and Course issues

- The pre-requisite structure make the programs highly constrained
 - Failure to take the appropriate pre-requisite can delay your degree.
- Important dates to remember:
 - Classes start tomorrow (September 4, 2024 – tomorrow!)
 - Last day to register in a new course or to make course changes is **Tuesday September 17, 2024**
 - Last day to withdraw from fall term and fall/winter courses with a full fee adjustment: **Tuesday September 30, 2024**
 - **Prerequisites are a factor in deciding to drop courses**
 - Last day for academic withdrawal from fall term courses is **November 15, 2024**

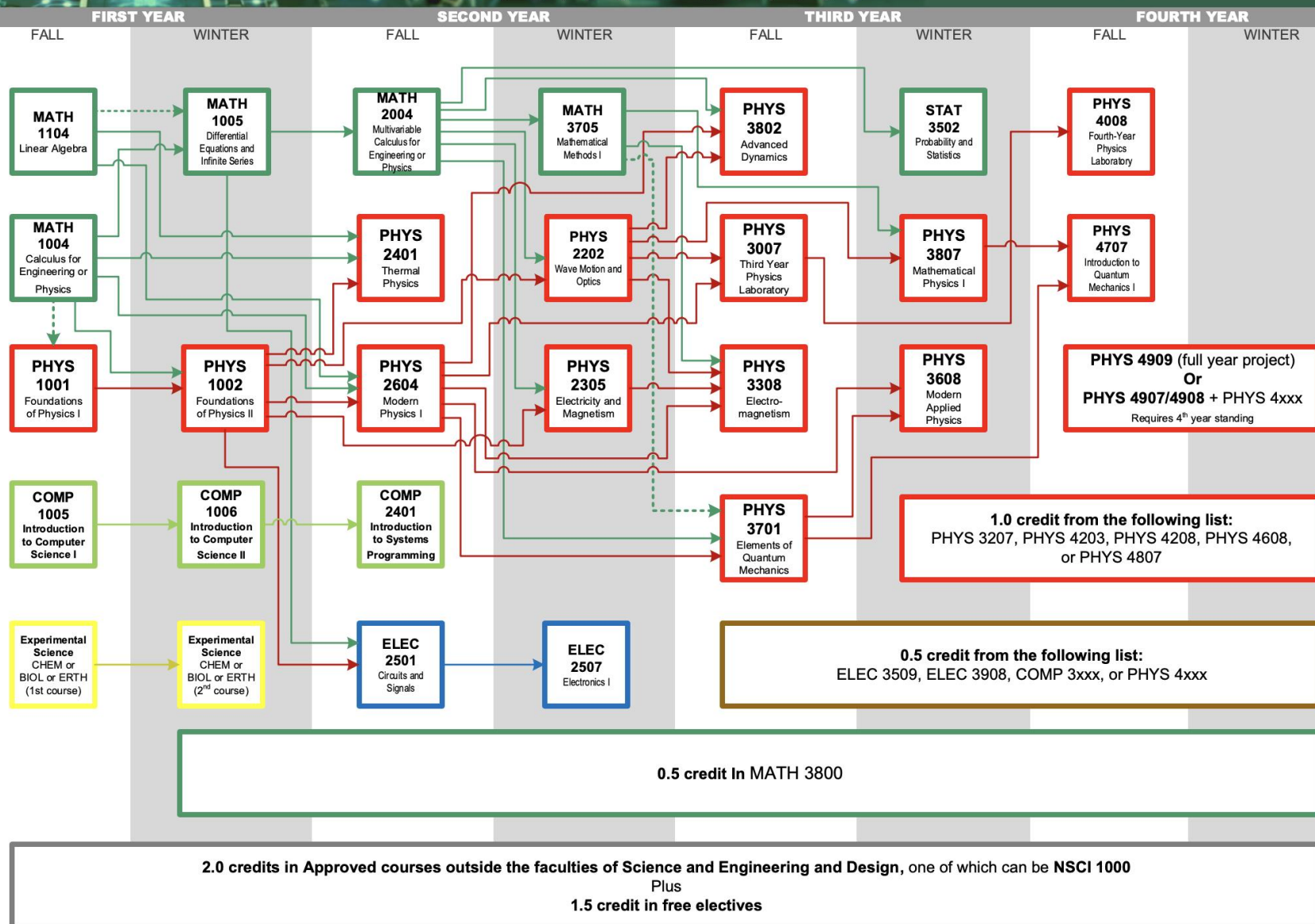
Welcome to Carleton Physics Programs

- **Calendar** has all the information you need
BUT
- Calendar lists required courses but does not show **simply** the required pattern
- **Prerequisite** structure is extremely important
 - Course descriptions in the calendar give prerequisites
 - **Department** website shows the pattern under the link “[Courses to Take Year by Year](https://physics.carleton.ca/current-students/undergraduate/courses-year-year)”
<https://physics.carleton.ca/current-students/undergraduate/courses-year-year>
- **Consult your Department**
 - Associate Chair for Undergraduate Studies
 - Alain Bellerive
 - Undergraduate Program Administrator
 - Joanne Martin
 - www.physics.carleton.ca

Sample Program Chart

APPLIED PHYSICS

Updated Oct. 2023



Note:

- Dashed connecting lines indicate concurrent prerequisite.
- Some Experimental Science, COMP, ELEC and MATH, and many elective courses are also offered in summer, which may help to reduce your course load in the Fall and Winter terms.

Program and Course issues

You will find a lot of information at

www.physics.carleton.ca

under the “Current Undergraduate Students” link

- Which courses to take in each year
- Academic policies including issues of **academic integrity**

Consult the Physics Web Pages

<https://physics.carleton.ca/current-students>



Department of Physics



Current Students

HOME

ABOUT

FUTURE STUDENTS

CURRENT STUDENTS

Undergraduate

Graduate

PEOPLE

RESEARCH

PHYSICS COLLOQUIUM

EVENTS AND
OUTREACH



The Department of Physics endeavors to assist our Undergraduate students in successfully completing their degree programs on time. We offer assistance in varying ways including:

- Access to [course outlines](#)
- [Program charts](#) to show the progression of your degree
- Registration help and guidance through both the Department and the [Registrar's office](#)
- Audit review sessions in the Fall to make sure you are on track with your courses
- [Career Services](#) provides job search support, assist with creating your cover letter, resumes and CV's
- And of course you can book an [appointment](#) or stop by the main office (3302 Herzberg Bldg) at any point during the year to review your audit or address any questions/concerns you have

- **Course Outline**
 - Course content and goals
 - Course structure
 - Grading scheme
 - Office Hours
- **Structure: Lectures, Labs, Tutorials**
 - High correlation between attendance and marks
 - Listen to the lecture. Take notes - Don't look at your phone.
- **Learn by doing!**
 - Read text to prepare for class
 - Assignments
 - Lab reports
 - Quizzes, tests, exams
 - **Feedback** on all this is incredibly important; it tells you our expectations and whether you are meeting them

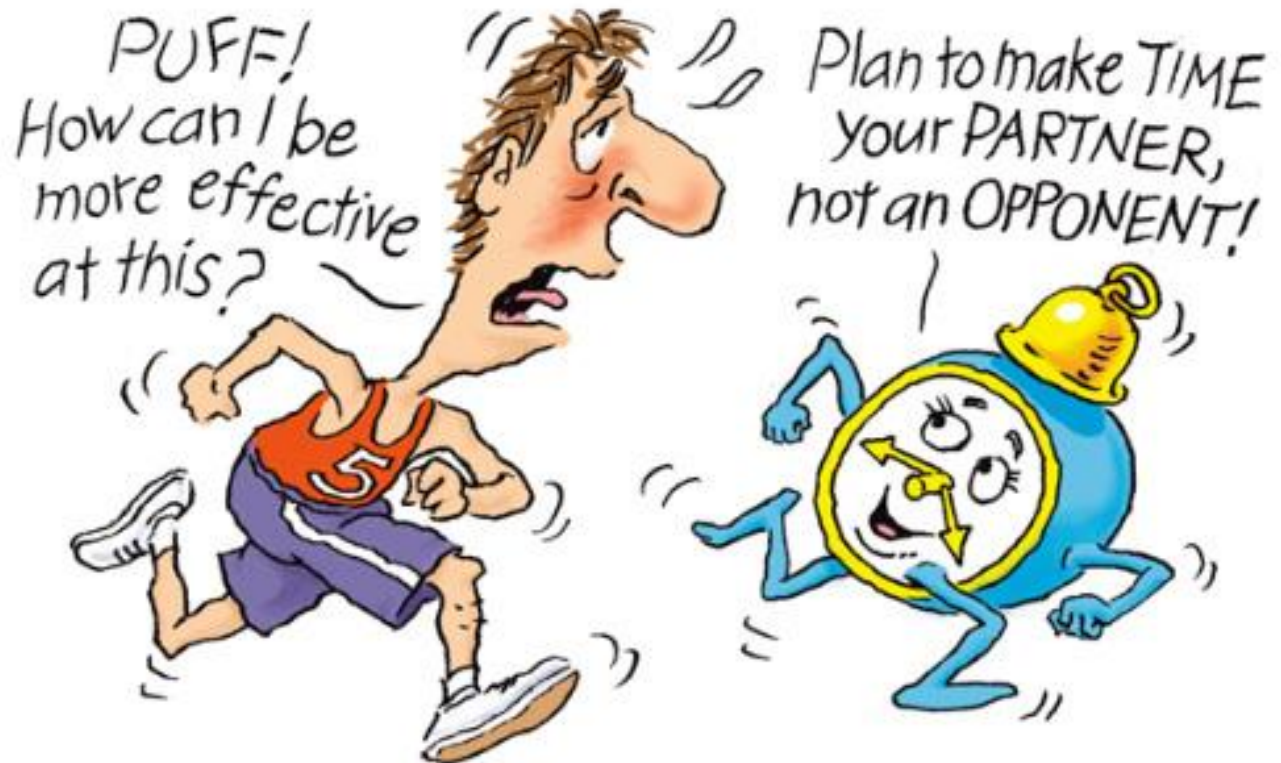
Elements of your success

- Read the textbooks!!!!
- Meet with you lecturer/lab personnel
- Attend classes
 - prepare ahead (read textbook)
 - take an interactive role
- Work with your colleagues (but respect academic integrity!)
- Develop effective ways to manage your time
- **Math pre-course(s) survey/assistance**

Courses: The Work!!

- Term is very short – only 12 weeks
- Due dates are fixed
- Much work is done outside of class time
- Stay on top of it all – manage your time
 - Limit your paid work
- In university you will have more freedom, but also more responsibilities
 - Stay proactive
- Develop good habits during the first year. Courses will become more complex.
 - Increasingly complex courses in your discipline bring the reward of seeing how it all fits together.

Stay on top of it all – manage your time



- **Teaching your classes:** professors
 - Talk to us; ask us questions
 - Go to Office hours
 - Email
 - Arrange for zoom or other meeting
- **Running your tutorials:** Prof, lab supervisor or TAs
 - Teaching assistants – TAs; these are graduate students or senior undergrads
- **Labs:**
 - Lab supervisory staff
 - TAs
 - Technical staff

People: Helping you

- Advising in Departments – examples:
 - **Physics drop-in center [run by the Department of Physics]**
 - Undergraduate Advisor
 - Course lecturer
- Advice and Support is available at the faculty and university level
 - Science Student Success Centre
 - <http://sssc.carleton.ca/>
 - Engineering and Design: <http://carleton.ca/engineering-design/current-students/undergrad-academic-support/>
 - Student Academic Success Centre/ Learning Support Services
- Your Peers
 - Physics Society

Science Student Success Center (SSSC)

How to reach us!

Office: 3431 HP

Phone: 613- 520-2600 ext 3111

Email: sssc@carleton.ca

Website: www.carleton.ca/sssc

Facebook Group:

SSSC - Carleton University
Science Student Success
Centre

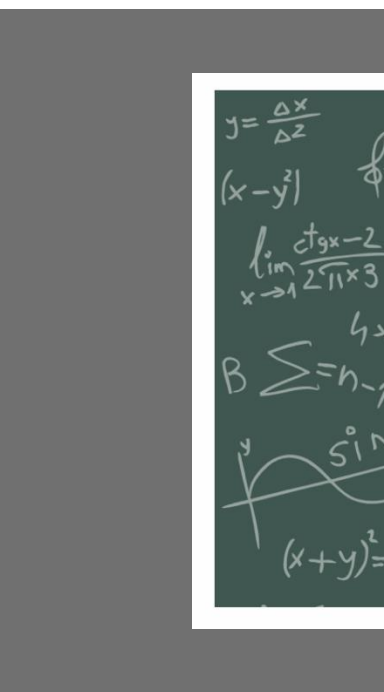
We can help you.....

- Find the resources you need on campus
- Improve the way you prepare for your semester.
- Find summer research opportunities
- Improve the way you
 - Manage your time
 - Take notes
 - Study for science exams
 - Clarify ideas and concepts to better understand course content



We are here to help you **learn how to learn** the things you need to know.

Office hours: Monday - Friday: 8:30 am - 4:30 pm



Canada's Capital University

Do yourself a favor!!!!

<https://sssc.carleton.ca/math4u>

People: Reaching you

We use **email lists** for sending out both Physics Department and Physics Society announcements.

We construct our lists from Carleton **cmail** email accounts.

If you normally use a different account, please have your **cmail** email forwarded to the account you check regularly.

University policy is that we only reply to university accounts (not gmail, hotmail, rogers.....)

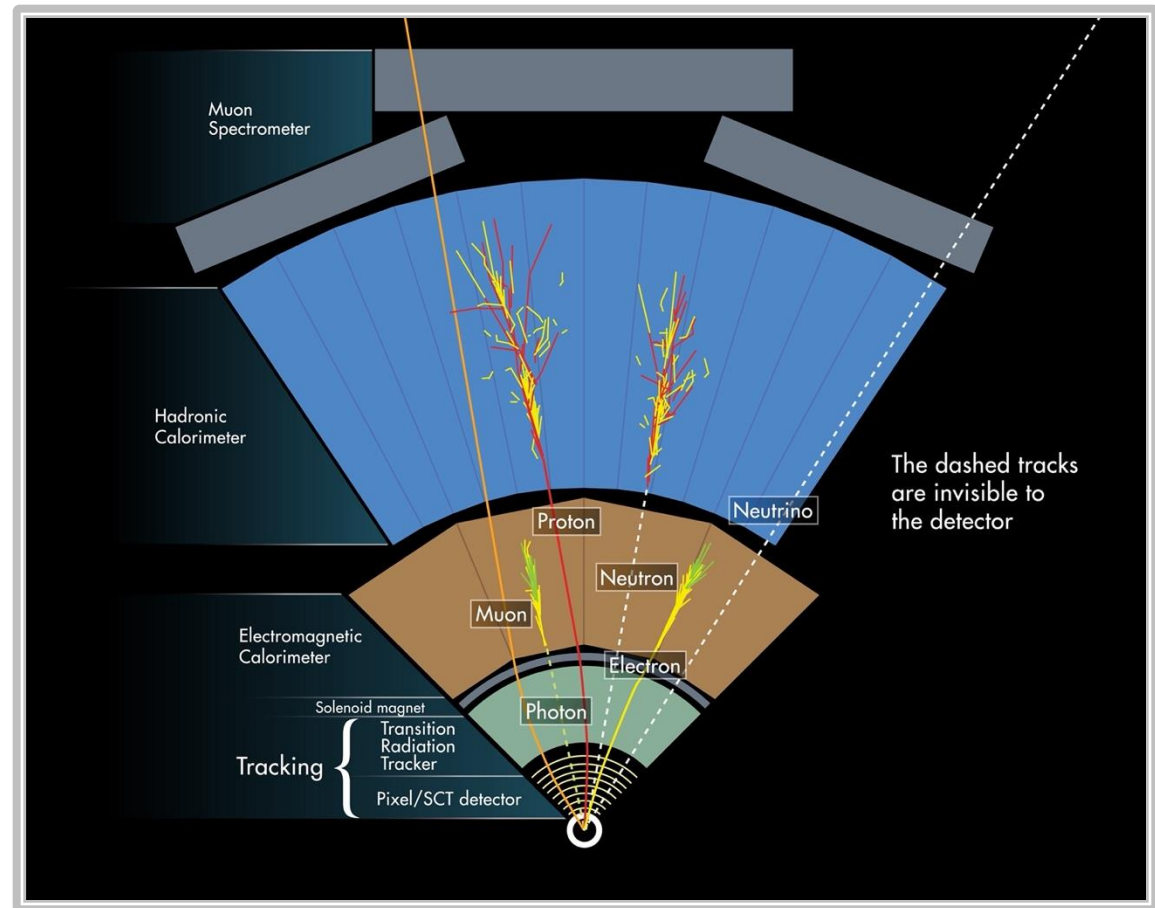
Please send email to undergrad-advisor@physics.carleton.ca

Always include your student number in email correspondence

Get involved in YOUR department!

- Pizza with a Professor [Physics Society]
- Observatory nights with the Physics Department Telescope
- Department Seminars
- Canadian Undergraduate Physics Conference
- Canadian Association of Physicists (CAP) Lecture
- Public Lectures

Learning and career in physics



Meet with A. Bellerive !!!!

Pizza and a Prof (near you SOON / stay tune)

People: Making the University

- Your professors teach you and also work on cutting edge **research** projects. Talk to them and get involved.
 - Honours project (in 4th year)
 - Summer research internship (USRA)
 - I-cureus (2nd to 4th year)
 - DSRI (summer internship for 1st year students)
- For your success:

Stay on top of it – Work hard – Be excited!

Good Luck!