



REPORT

Joint Working Group on Undergraduate Tutorials

March 2014

Background

Mandate

The Provostial Working Group on Undergraduate Tutorials was established through a joint letter of intent during the last round of bargaining (February 2012) between the University of Toronto and CUPE 3902, Unit 1 (hereafter 'CUPE'). The Working Group was tasked with developing a broad categorization scheme that captures the range of activities currently assumed under the heading of 'tutorial.' In addition, the Working Group was asked to make recommendations to the Provost regarding:

- Best practices for appropriate education components based on current research, including, but not limited to, the appropriate relations between pedagogical goals, size and mode of delivery;
- Time required to prepare and deliver various educational components;
- Appropriate elective and required training, including online approaches, for TAs offering various educational components;
- An implementation strategy;
- Possible revisions to the Letter of Intent: Improving the Quality of Undergraduate Experience in Tutorials;
- The membership of the Working Group, along with a meeting schedule, is included in Appendix A.

Overview of Working Group Activities

The Tutorial Working Group (TWG) began its meetings with a review of the work conducted by the 2009-10 Tutorial Working Group (chaired by Jill Matus, Vice-Provost, Students & First-Entry Divisions). This included a review of the final report and recommendations produced by this Group. Additionally, the Working Group reviewed the data collected by the previous Working Group on Undergraduate Tutorial Experience (as captured in its final report, 2010) and discussed additional information provided by the Centre for Teaching Support & Innovation (CTSI) regarding the types of activities that were occurring in these tutorials (this information was collected by CTSI directly from departments/units and divisions). CTSI also provided background information for the early discussions of the Working Group on the types of pedagogical support currently being provided to TAs at the University of Toronto and on TA and tutorial data from course evaluations. This information was provided in a report to the Working Group and can be found in Appendix B.

Following this, the current Working Group focused on a number of key activities, including: a review of existing literature on tutorials, the development of a tutorial categorization scheme and suggestions for related resources, the development and administration of a survey regarding tutorial practices, and the subsequent analysis of collected data. The following provides a summary of these activities.

Literature Review

The Centre for Teaching Support & Innovation, which provided support to the Working Group, conducted a thorough review of the literature on tutorials and tutorial practices. This review found that very little research had been conducted in this area in a general sense (e.g. there was limited research on recommended *tutorial* practices and sizes); rather, a significant body of literature dedicated to pedagogical goals and approaches (including discussion-teaching techniques, skill-based learning, etc.) relating to learning objectives was identified. As well, the literature on tutorials was often discipline specific. CTSI also shared an overview of the research on class sizes which focuses primarily on teaching and learning strategies, often in relation to disciplinary contexts. CUPE members also reviewed some materials relating to tutorial size and presented this information to the group. All information related to the combined collection of relevant literature and research was discussed by the Working Group. An overview of some of the literature reviewed is included in Appendix C.

Development of a Tutorial Categorization Scheme

The Working Group spent several meetings discussing and developing a categorization scheme for tutorials, as requested in the Joint Letter of Intent. To do so, members reviewed and identified the range of tutorial activities that occur at the University of Toronto. The Working Group began by seeking to define the term ‘tutorial’ within our University of Toronto context, acknowledging that individual learning objectives and pedagogical goals (as identified by instructors, departments/units, and programs) varied and directly impacted the range and scope of activities undertaken in a particular tutorial session. To that end, the Working Group’s definition of ‘tutorial’ and the related categorization scheme aims to capture this variety.

The categorization scheme identifies four separate categories of activity, including: discussion-based sessions, skill development sessions, review sessions, and laboratories. For each, a range of activities was identified along with the relevant training and support TAs would require to effectively deliver tutorials employing these activities. There are several other orthogonal classifications: mandatory vs. optional sessions; regular (weekly/biweekly/monthly) vs. sporadic (or as-needed); and live vs. online.

As part of this exercise, the Working Group also drafted a list of topics to be addressed in a practical guide on tutorials for instructors and TAs. This document was deemed necessary to provide guidance to instructors in the development of tutorials, to help promote transparency in relation to the instructor’s expectations for tutorials and of TAs, to provide strategies for communication between instructors and TAs, and to provide suggestions for the mentoring of TAs. The practical guide will be developed by CTSI in consultation with CUPE.

The categorization scheme and related materials are described more fully in Appendix D.

Administration of a Survey Regarding Tutorial Practices at the University of Toronto

In order to gather more specific information on current tutorial practices at the University of Toronto, the Working Group developed and administered a survey that was sent to

department/unit heads in the Faculty of Arts & Science, UTM, UTSC, and Engineering. As noted in the preamble, the survey was designed to seek “information regarding the ways in which department/divisions currently make decisions about mounting and structuring tutorials and allocating resources to them. This information will inform TWG discussions and recommendations.”

The survey (see the full set of questions in Appendix E) was sent to 98 department/unit heads/associate department/unit heads and 32 responses were received. A number of themes emerged from the survey data, including:

- Tutorial allocations differ by course and are primarily determined in relation to course objectives, tutorial activities, and course size.
- Budgetary restrictions frequently influence how decisions about tutorials were made each year.
- Practices and allocation differ across disciplines (in part based on pedagogical goals).
- Individual instructors play a key role in identifying the need for tutorials, in making recommendations regarding TA allocations, and in determining TA roles and responsibilities.
- Training/mentoring of TAs (by course instructors) was identified as a best practice for ensuring successful tutorial delivery.
- Departmental/unit recommendations/preferences for tutorial sizes align with current practices in the majority of units.
 - Responses indicate congruency between what is *believed* (in the opinion of the survey respondent) to be an ideal tutorial size and what is *actually occurring* in practice (within departments/units and divisions). Variability in relation to tutorial sizes (in terms of beliefs and practice) is evident.
- Respondents regularly noted that decisions about tutorial allocations are frequently related to/influenced by pedagogical goals but may also be impacted by level/year of course, safety issues, and sometimes room size.
- Respondents also noted that while tutorial sizes may be established in advance, attendance numbers were frequently much lower.

A more detailed analysis of the data collected through the survey, along with summaries of the responses for each questions, is presented in Appendix F.

Recommendations

The Joint Working Group on Undergraduate Tutorials recommends the following:

1. Definition:

That the University of Toronto adopt the following definition of ‘tutorial’:
The term ‘tutorial’ at the University of Toronto is used to identify interactive and participatory sessions, primarily led by Teaching Assistants. During these interactive and participatory tutorial sessions, Teaching Assistants are responsible for gauging student understanding and providing formative feedback, in line with assessment structures and guidelines set by the instructor.

2. Tutorial Categorization Scheme:

That the University of Toronto adopt a categorization scheme for tutorials based primarily on learning objectives and the range and scope of activities that occur within the context of a tutorial. The Working Group recommends the following four categories of tutorials:

- Discussion-based sessions
- Skill development sessions
- Q&A and exam/test/assignment review sessions, and
- Laboratories/Practicals.

These activities are not mutually exclusive and it is acknowledged that any one tutorial may involve a range of them based on the established learning objectives. The categories, however, are intended to denote the primary activity (or activities) of a given tutorial. See Appendix C for a full description of the categorization scheme. See below for further recommendations for relevant TA training related to the various tutorial activities, which is to be developed through collaboration between the Centre for Teaching Support & Innovation (CTSI) and CUPE.

3. Course Planning and Goals:

That Departments/units ensure that the available tutorial resources and the constraints that might come with them are recognized by course instructors when designing their courses. That instructors be encouraged to craft explicit pedagogical goals for tutorials associated with their courses. These goals should be shared with both students in the tutorials and TAs. Given these goals and the resources provided for the course, the instructor should help TAs develop the skills they will need to achieve the goals within the constraints of tutorial size and course content. Instructors can help to facilitate the necessary skill development for

their TAs (e.g. by providing information on relevant training, holding regular meetings with TAs, observing tutorials and providing feedback to TAs, etc.).

4. TA Training and Support for Leading/Facilitating Tutorials:

That instructors be encouraged to use the new tutorial categorization scheme to assess not only which learning activities will best support their course goals, but also what training their TAs might need to help realize these course goals given the number of students in the course. If the course includes tutorials, instructors should make decisions about which learning activities will best meet their learning objectives for these tutorials prior to their pre-term meetings with TAs, and should take into account the learning strategies and teaching approaches that will be required to realize these learning objectives given the tutorial size. Where possible, instructors should endeavour to match a learning activity with an optimal number of students. For example, if regular whole-class discussion of a topic is a primary learning activity, a good number might be a maximum of 25 students. However, if discussion amongst peers in a tutorial is desirable, the total number could be higher, with students organized in small discussion groups (e.g., 3-4 students), provided the TA has adequate training and preparation time to facilitate these groups. If the primary focus of a tutorial is to develop a specific skill (critical reading, analytical writing, etc.) the number of students might be as many as 30. Once again, if skill development can be supported through peer interaction, then the number of students in a tutorial could be higher, with students organized in small peer groups (e.g., 3-4 students) as long as the TA is trained and has sufficient preparation time for these activities. For review sessions, the number of students will vary depending on the material being reviewed and the method of review (problem-solving, question-and-answer, facilitated study, etc.), but again, as for other tutorial types, higher numbers of students could be accommodated using different teaching approaches and teaching techniques. (The numbers mentioned here are drawn from the *Tutorial Structure and Resource Allocation Survey* found in Appendix E. For more information on tutorial sizes, please see the *Thresholds for Additional TA Training* table found in Appendix D.)

If the number of students surpasses the numbers mentioned above (and in the table *Thresholds for Additional TA Training* in Appendix D), instructors should identify which teaching approaches and facilitation skills are needed in order for the TA to conduct the learning activities successfully. The Centre for Teaching Support & Innovation will develop resources to help instructors determine which learning activities will best support their learning objectives for the course tutorials as well as how to structure learning activities effectively for a range of class sizes. Instructors, in conversation with their TAs, will determine if additional training to carry out these learning activities in tutorials is required, taking into consideration the number of students in a given tutorial.

5. DDAH Form:

That the University of Toronto modify the Description of Duties and Allocation of Hours (DDAH) forms to help instructors communicate to Teaching Assistants the tutorial activities, the tutorial category (based on those activities), and recommended TA training for tutorials

in that category. During the meeting in which instructors and Teaching Assistants discuss and sign the DDAH form, instructors should indicate the category of the tutorial based on the recommended categorization scheme and which learning activities will take place most often within the tutorials. In this meeting, instructors should also communicate to TAs the number of students in the tutorial (if known) and recommend training opportunities appropriate for the desired learning activities to take place in that size of tutorial.

6. Paid TA Training for Facilitating Tutorials:

That the University offer paid training the first time a TA's appointment includes facilitating tutorials in one of the particular categories noted in this document. This training should be tailored to the primary activity in the tutorial section(s) that the TA will facilitate (e.g., "Leading Small-Group Discussions," "Effective Q&A Sessions," etc.). That the University also offer paid training when a TA's appointment involves facilitating tutorials whose enrolment exceeds the suggested threshold ranges found in Appendix D: *Thresholds for Additional TA Training*. Payment for such training shall be as follows:

- a) Such training may be included within the hours of mandatory training currently stipulated in the Unit 1 Collective Agreement for a first appointment.
- b) If the TA did not receive relevant Tutorial-specific training as part of the training for the first appointment, then up to three additional hours of paid training may be provided.
 - i. One hour of this additional training shall be in addition to the specified hours of the TA appointment (but will not be included in the terms of any future appointment commitments).
 - ii. Up to two hours shall be built into the terms of the appointment.

We recommend that the University adapt its current TATP sessions to reflect the recommended categorization scheme, and that CTSI support hiring departments/units as they develop skills-focused training sessions for TAs leading tutorials in their discipline.

7. Resource Development and Implementation:

That CUPE and the University collaborate to make the recommendations of the Working Group available to teaching staff and faculty at the University in the form of a series of pedagogical skills workshops and troubleshooting modules ("What do you do if x happens in your tutorial...?"). All workshops focused on particular learning activities (small group discussion, Q&A sessions, etc.) will model how to adapt a given learning activity to suit different sizes of classes. Additional training materials focused on adapting classroom management techniques to larger classes will be incorporated into training modules (to be delivered both as interactive workshops and via online modules). CUPE representatives will be invited to participate with CTSI in the planning and production of these pedagogical resources and feedback on the modules will be sought before they are launched. The planning for these pedagogical resources and modules should be completed by April 30, 2014, with piloting of some resources to take place in spring/summer 2014 and full

implementation to take place over the course of the 2014-15 academic year.

8. Letter of Intent:

That, should the Provost approve these recommendations, CUPE and the University meet to revise the *Letter of Intent: Improving the Quality of the Undergraduate Experience in Tutorials in the Unit 1 Collective Agreement*. These updates should address the new definition of tutorials, the new categorization scheme, the new recommended ranges for each category, and the new recommendations for training. This should be done by the end of March 2014.

9. Timeline for implementation:

Should the Provost accept these recommendations a recommended timeline would be determined.

Appendices

A: Working Group Membership and Meeting Schedule

B: Background Information Prepared by CTSI for the Working Group

C: Literature Review: Tutorials/Class Size and Student Learning

D: Framework for Tutorial Categorization and Thresholds for Additional TA Training

E: Tutorial Structure and Resource Allocation Survey

F: Analysis of Tutorial Structure and Resource Allocation Survey – Summary of Collected Data

G: Modified DDAH Form (Draft)

Appendix A: Working Group Membership and Meeting Schedule

Membership:

Jill Matus - Vice-Provost, Students & First-Entry Divisions / Mark McGowan - Acting Vice-Provost, Students & First-Entry Divisions (from 21 May –August 16 2013) [Co-Chair]

Morgan Vanek - CUPE 3902 Unit 1, Division 1 Representative [Co-Chair]

Donald Ainslie - Principal, University College

Ryan Culpepper - CUPE 3902 Unit 1, General Member

Corey Goldman - Associate Chair (Undergraduate Studies), Dept. of Ecology & Evolutionary Biology, Faculty of Arts & Science

Angela Hildyard - Vice-President, Human Resources & Equity

Ashleigh Ingle - CUPE 3902 Unit 1, Division 3 Representative

Lindsay Mahon - CUPE 3902 Unit 1, Division 2 Representative

Kumar Murty - Chair, Department of Mathematics, Faculty of Arts & Science

Abouzar Nasirzadeh - CUPE 3902 Unit 1, Chair

Cheryl Regehr - Vice-Provost, Academic Programs (until May 21, 2013)

Sara Suliman - CUPE 3902 Unit 1, Division 4 Representative / Lok-Kin Yeung from October 2, 2012)

Support to the Working Group provided by:

Megan Burnett - Acting Associate Director, Centre for Teaching Support & Innovation

Terri Cook - Executive Assistant to the Vice-Provost, Students & First-Entry Divisions

Pam Gravestock - Associate Director, Centre for Teaching Support & Innovation

Jesse Payne - CUPE 3902 Unit 1, Staff Representative

Carol Rolheiser - Director, Centre for Teaching Support & Innovation

Meeting Schedule:

29 June 2012

22 August 2012

17 September 2012

2 October 2012

23 October 2012

26 November 2012

10 December 2012

21 May 2013

23 July 2013

29 August 2013

20 December 2013

Appendix B: Background Information Prepared by CTSI for the Working Group

A: Pedagogical Training and Support for Teaching Assistants

For over a decade, the Teaching Assistants' Training Program (TATP) has been providing pedagogical support to graduate students and teaching assistants from across the university. The TATP is a peer training program staffed by fifteen graduate students, including five coordinators and ten trainers. The TATP staff work in teams representing the four SGS divisions.

A full suite of programming is offered by the TATP, including workshops, training for first-time TAs, a two-day course design institute, microteaching sessions, and an annual TA Day. In Fall 2012, the TATP began offering training for first-time Course Instructors. In addition, 15 graduate student staff provide on-site teaching observations, confidential consultations, and dossier consultations. Two certificate programs are offered through the TATP: the Fundamentals of University Teaching and the Advanced University Teaching Preparation. Both of these certificates are recognized by the School of Graduate Studies' Graduate Professional Skills (GPS) program.

The TATP also introduced the first institution-wide award for TAs in 2004 and continues to administer this annual recognition for excellence.

The following table provides data on TATP program attendance from 2009 – 2012:

	2008-2009	2009-2010	2010-2011	2011-2012
Workshops offered	65	88	95	90
Total attendance at all workshops	1115	1173	1441	1750
Unique attendees at workshops	597	666	766	677
Fundamentals certificate registrants	203	178	249	216
AUTP certificate registrants	206	237	279	227
Attendees at TA Day	162	182	127	197
Departmental training workshops delivered by TATP	67	58	57	56
Course Design Institute attendees	Not offered	Not offered	10	10
Microteaching I and II	52	55	70	66
In-class observations	26	21	24	22
Teaching dossier reviews	50	26	45	50

There are a number of other programs available on campus that offer pedagogical training for TAs and graduate students, including the Teaching in Higher Education (THE 500) course (offered through Woodsworth College), and the Prospective Professors in Training Program (offered through Engineering). Discipline-focused programming is also offered through many departments and divisions, including English in the Faculty of Arts & Science, OISE, and Rotman.

In addition, graduate students may enroll in the Graduate Professional Skills (GPS) program, offered through the School of Graduate Studies. The GPS initiative allows students to track their progress through a range of optional programming offered by units from across U of T. Program offerings focus on four key areas of professional development, including: communication and interpersonal skills, personal effectiveness, teaching competence, and research-related skills. Students who complete all of the components of the GPS will have this noted on their transcripts. (For additional information see: <http://www.sgs.utoronto.ca/informationfor/students/profdev/gps.htm>)

B: TA and Tutorial Data from Course Evaluations

At present, practice varies across the institution and within divisions with respect to the nature and scope of questions regarding TAs and/or tutorials on annual course evaluation forms. In some cases, additional questions are added to the divisional/faculty paper form (for divisions who have not yet implemented the new University of Toronto Course Evaluation Framework); in others, supplementary paper forms are administered to assess the value of tutorials and/or the contributions of the TA to the learning experience of students.

The following is a sample of the sorts of questions that appeared/appear on paper-based divisional course evaluation forms:

A&S: Q 15. The value of the tutorial is...
[very low>> low>>below average>>average>>above average>>high>>very high]

Engineering: Q 21. The value of the tutorial was...
[very low>> low>>below average>>average>>above average>>high>>very high]

Supplementary form - Please rate the teaching assistant for the associated tutorials and laboratories on an individual basis using the following 8-point scale:
[don't know/not applicable >>extremely poor>>very poor>>poor>>adequate>>good>>very good>>outstanding]

UTM: Q 18. The value of the tutorial is...
[very low>> low>>below average>>average>>above average>>high>>very high]

UTSC: Q 15. The value of the tutorial is...
[very low>> low>>below average>>average>>above average>>high>>very high]

The University of Toronto is currently in the process of implementing a new course evaluation framework (see: <http://www.teaching.utoronto.ca/teaching/essentialinformation/evaluation-framework.htm>). As part of this initiative, divisions may include specific questions regarding tutorials and TAs on their forms. These questions may be selected from the institutional question bank. However, all divisions that have implemented the new Course Evaluation Framework thus far have not included TA items at the divisional level. A decision has been made to not move forward with exploring online TA/Tutorial evaluations until online instructor-course evaluations

have been implemented across the institution. In the interim most divisions are maintaining their current practices.

C: Tutorial Size

Data were collected for review by the previous iteration of the Tutorial Working Group (2009-2010). As indicated in the table below, 58% of the tutorials offered in 2009-10 across six divisions ranged in size from 1 to 35 students. A much smaller proportion of students were enrolled in tutorials with 101+ students (at 4.5%).

Tutorial Data (2009-2010): Arts & Science, Engineering, Nursing, Pharmacy, UTM, UTSC

Size	Curriculum level				Total
	1	2	3	4	
1-20	137	199	110	77	523
21-35	370	294	109	51	824
36-50	166	120	78	40	404
51-80	113	164	88	28	393
81-100	29	18	15	3	66
101-200	36	28	16	6	86
201+	8	8	2	0	18
Total	859	832	418	205	2314

Tutorial size (100+) by division (as reported):

	A&S	Engineering	Nursing	Pharmacy	UTM	UTSC	TOTAL BY TUTORIAL SIZE
101-200	30	34	11	2	8	1	56
201+	5	1	0	3	6	3	13
TOTAL BY DIVISION	35	35	11	5	14	4	

Scope and Nature of Tutorial Sessions

Further review of these tutorials (100+) was recently conducted to gain a better sense of the nature and scope of the sessions and to understand the role of the TA in the various contexts. A few observations can be made based on this most recent review:

- Nursing reported on 11 courses with TAs for the original survey of tutorials conducted for the first iteration of the Working Group; however, Nursing does not conduct traditional tutorials. TAs are primarily responsible for grading. These 11 courses may have been included in the count from the 2010 report.
- Pharmacy reported on 6 courses with tutorial sizes of 100+; however, in 4 of these courses the tutorial sections are broken down into small groups (between ~30 and ~60 students). These 6 courses may have been included in the count from the 2010 report.

- Data provided for Engineering did not include detailed information about tutorial size. Enrolment numbers were provided for courses only. Engineering tutorials range in size from 20 – 60 students; with multiple sections being offered for large courses.
- In some cases, tutorials were used for:
 - Question and answer periods as in Pharmacy and Biology (UTSC)
 - Quiz, test, or exam preparation as in Pharmacy, Chemistry (UTM), Biology (UTSC)
 - Film screenings (UTSC)
- In some cases, faculty members lead the tutorial sections as in Biology (UTSC)
- The large tutorial previously offered in the History Department (UTM) has been discontinued and multiple sections are now offered, each capped at 18.

This additional information about the scope and nature of the tutorial sessions that are offered to large groups is significant. We now know that many of these tutorials are not designed for more intensive teaching responsibilities, such as discussion-based activities. Rather, these large tutorials are typically used for test and exam preparation, to respond to questions from students, to administer quizzes/tests/exams/assignments, or to provide information about assignments. These sorts of activities can be conducted with large groups of students. TAs should be given direction from the course instructor with regard to the goals of these tutorials and TAs may take advantage of training (through the TATP and other programs on campus) to help prepare them in such areas as classroom management.

D: Additional Details on Tutorials (100+)

Data on tutorial size were originally collected for the first iteration of the Working Group in 2009-10, as shown above in Appendix B, Section C). This data, drawn from ROSI, showed 102 classes reporting tutorial sizes of 100+ across 5 divisions. In the summer of 2012, CTSI contacted the divisions where tutorials with 100+ enrolments were reported. The primary goal was to obtain more information about the types of activities taking place in these large tutorials, e.g. to determine if they were being taught by TAs or by instructors, if they were being used for discussion-based ‘tutorials’ or for other purposes. As reported by CTSI at a meeting of the Working Group in the fall of 2012, in many cases large tutorials were being used for review purposes, for film screenings, were often taught by instructors, or were in some cases subdivided into smaller groups (something not captured in ROSI). Some departments had abandoned the large tutorials altogether in subsequent years. The data collected were not intended to cover all faculties or provide a complete updated inventory. The intention was to provide a better understanding of how larger tutorials were being used in divisions so as to aid with the development of a tutorial categorization scheme, as subsequently developed and recommended in this current report. The following tables show the information collected in the summer of 2012 about the 2009-10 tutorials with reported sizes of 100+.

Nursing

Course Code	Course Title	Course Enrolment	Number of TAs	Additional Details
NUR410	Nursing and the Health Care System: Policy, Ethics & Politics	151	2	There are no traditional tutorials offered in Nursing; TAs are primarily assigned grading responsibilities.
NUR430	Research and Nursing Scholarship	151	2	
NUR420	Advanced Nursing Theory	153	2	
NUR370	Pathophysiology & Pharmacotherapeutics: Nursing Assessment & Intervention	171	3	
NUR371	Introduction to Acute Care Nursing: Adult	171	6	
NUR372	Introduction to Identity, Difference & Mental Health	171	6	
NUR373	Introduction to Nursing Care of Children & Families	171	6	
NUR390	Introduction to Community Health: Nursing Perspectives	171	3	
NUR350	Introduction to Nursing Practice	174	3	
NUR351	Introduction to the Discipline and Profession of Nursing	174	3	
NUR360	Lifespan 1: Families in the Child Bearing Years	174	2	

Pharmacy

Course Code	Course Title	Course Structure (L, T, P)	# of Tutorial Sessions	Tutorial Enrol Cap	Course Enrol Cap	Additional Details
PHM122H1 (no longer offered)	Introduction to Statistics			180	180	there is one tutorial section for the class of ~180
CHM223H1	Physical Chemistry for Pharmacy			80	160	the class of ~160 is divided into 2 tutorial sections
PHM223H1	Methods of Pharmaceutical Analysis			60	240	the class of 240 is divided into 4 tutorial groups of 60 students each
PHM224Y1 (now PHM 141)	Pharmaceutics	Lectures, tutorials	13	240	240	there is one tutorial section for the class of 240; 4 TAs take turns leading the tutorials. Tutorials are used for test, quiz and exam prep and for Q&A sessions
PHM225H1	Introduction to Biochemistry and Molecular Biology	Lectures, tutorials	1	90	90	there is one tutorial section for the class of ~90; 3 of the 10 tutorial hours are led by a TA
PHM323H1	Applications of Pharmaceutical Analysis	Lectures, tutorials		60	240	the class of 240 is divided into 4 tutorial groups of 60 students each

UTM

Course Code	Course Title	Course Structure (L, T, P)	# of Tutorial Sessions	Tutorial Enrol Cap	Course Enrol Cap	Additional Details
BIO152H5	Intro Evolution & Evol.Genetics	24L; 15P; 12T	1	360	360	
BIO200H5	Introduction to Pharmacology	36L; 12T	1	120	120	
BIO210Y5	Human Anatomy and Physiology	48L; 12T	1	450	450	
BIO304H5	Physiology of Neural Systems	36L	0	NA	290	No tutorial sections listed for this course at this time.
BIO372H5	Molecular Biology	24L; 12T	1	120	120	
CHM243H5	Intro Organic Chemistry II	24L; 12T; 48P	1	200	200	Tutorial sections used for mid-terms, quizzes, test/exam prep
CHM361H5	Structural Biochem	24L; 12T	1	200	200	Tutorial sections used for mid-terms, quizzes, test/exam prep
ERI260H5	Organizatn Behaviour	36L	1	200	200	
FSC239Y5	Intro to Forensic Science	48L; 24T	8	37	290	
HIS101H5	Intro to Historical Studies	24L; 10T	20	18	350	Large tutorials only offered in 1 year (2009/10)
PHL245H5	Mod Symbolic Logic	36L	1	300	300	

UTSC

Course Code	Course Title	Course Structure (L, T, P)	# of Tutorial Sessions	Tutorial Enrol Cap	Course Enrol Cap	Additional Details
ENGB70H3	Introduction to Cinema	Lectures, Screenings	0	101	101	Film screenings are designated as "Tutorials"
BGYB11H3	Molecular Aspect of Cellular and Genetic Processes	Lectures, Tutorials	4	304	304	2 tutorial sessions are for term test/exam prep; 2 are Q&A sessions
BGYB31H3	Plant Physiology	Lectures, Tutorials	6	343	343	Tutorials are led by course instructor; TAs grade
BGYB50H3	Ecology	Lectures, Tutorials	3	445	445	Tutorial sessions are computer-based and are used to complete assignments and to deliver tests/exams

Engineering

Course	Course Title	Tutorial Enrol Cap	Course Enrollment	Additional Details
APS301H1	Tech Society & Biosphere I	20 - 60	216	<p>Tutorials activities include:</p> <ul style="list-style-type: none"> • Q&A sessions • Problem-set review and practice • Delivery of tests/quizzes <p>Tutorials are led by TAs and in some cases instructors may also attend some sessions</p>
APS302H1	Tech in Soc & the Biosphere II		108	
CHE249H1	Engineering Econ.Analysis		115	
CHE333H1	CHEM. REACTION ENG.		137	
CHE462H1	FOOD ENGINEERING		101	
CIV100H1	Mechanics		100	
CIV100H1	Mechanics		107	
CIV100H1	Mechanics		108	
CIV100H1	Mechanics		109	
CIV100H1	Mechanics		110	
CIV100H1	Mechanics		113	
CIV209H1	Civil Engineering Materials		124	
CIV235H1	CIVIL ENG. GRAPHICS		129	
CIV313H1	REINFORCED CONCRETE I		122	
CIV324H1	Geotechnical Engineering II		119	
CIV332H1	TRANSPORT 2-PERFORM.		122	
CIV340H1	MUNICIPAL ENGINEER.		119	
CIV375H1	BUILDING SCIENCE		120	
CIV380H1	Sustainable Energy Systems		130	
CIV424H1	Foundations & Earthworks		104	
CME185H1	EARTH SYSTEMS SCIENCE		129	
CME261H1	Engineering Mathematics I		142	
CME263H1	Probability Theory		144	
ECE496Y1	DESIGN PROJECT		145	
MIE222H1	MECH.OF SOLIDS I		111	
MIE231H1	PROB.&STAT. ENG. APPLICATIONS		106	
MIE301H1	KINE.&DYNAM.OF MACH.		194	
MIE312H1	FLUID MECHANICS I		101	
MIE315H1	Design for the Environment		101	
MIE333H1	Engineering Physics		107	
MIE342H1	CIR with Appl to Mech Eng Sys		100	
MIE442H1	MACHINE DESIGN		103	
MIE496Y1	THESIS/DESIGN PROJ.		148	
MIE540H1	PRODUCT DESIGN	106		
MSE270H1	MATERIALS SCIENCE	113		

E: Categorization of Tutorials

The term 'tutorial' is currently used to capture a wide range of activities that supplement or complement the lecture component of a course. To fully capture the nature and scope of these tutorial sessions, it may be necessary to break down the term into further categories. Based on the types of activities and learning objectives currently present in tutorial sessions across University of Toronto divisions, these may include:

Discussion-based sessions:

These sessions provide opportunities for additional, or more in-depth discussion, of course content and may involve small-group activities. TAs would lead these sessions and facilitate discussion and activities.

Exam/test/quiz preparation sessions:

These sessions provide opportunities for review of key course content in preparation for exams, tests, or quizzes. Students may also be provided with information about the format of tests/exams/quizzes and the expectations with regard to performance. TAs would lead the review and respond to student questions in these sessions.

Q&A sessions:

These sessions allow students to ask questions about course content and assignments. They are typically offered several times during the year prior to major course deadlines and are normally optional. TAs would respond to student questions, clarify course content, and provide information on course assignments in these sessions.

Skill-development sessions:

Activities in these sessions might include opportunities to practice various skills such as language acquisition, use of computer programs, problem sets, and so on. TAs would help to facilitate the activities during these sessions and would provide formative feedback on progress.

Supplementary lecture content:

These sessions may be used to introduce additional content or to provide more in-depth discussion of course content. Such sessions are often led by faculty members.

Film screenings:

Films discussed in a course may be screened in a separate session. In these sessions, TAs may be assigned to respond to questions from students.

Test/quiz/assignment delivery:

Such sessions may be used to administer assignments to students. TAs would introduce and administer the assignment.

Problem-solving/Practice sets:

These sessions, common to engineering, math, and science tutorials provide opportunities for students and TAs to practice and review problem sets.

Laboratories:

These sessions, typically identified as “Practicals” in ROSI (not as Tutorials), provide opportunities to run experiments or tests in a lab setting.

When categorizing tutorials the following should also be considered:

- Whether attendance at the tutorial is optional or mandatory for students
- Whether the tutorial is offered weekly or periodically
- Whether the tutorial is delivered in-person (in class) or online

Appendix C: Literature Review: Tutorials/Class Size and Student Learning

- Bandiera, O., Larcinese, V., & Rasul, I. (2008). Heterogeneous Class Size Effects: New Evidence from a Panel of University Students. *The Economic Journal*, 120 (549): 1365–1398.
 - Abstract: Over the last decade, many countries have experienced dramatic increases in university enrolment, which, when not matched by compensating increases in other inputs, have resulted in larger class sizes. Using administrative records from a leading UK university, we present evidence on the effects of class size on students' test scores. We observe the same student and faculty members being exposed to a wide range of class sizes from less than 10 to over 200. We therefore estimate non-linear class size effects controlling for unobserved heterogeneity of both individual students and faculty. We find that — (i) at the average class size, the effect size is $-.108$; (ii) the effect size is however negative and significant only for the smallest and largest ranges of class sizes and zero over a wide range of intermediate class sizes from 33 to 104; (iii) students at the top of the test score distribution are more affected by changes in class size, especially when class sizes are very large. We present evidence to rule out class size effects being due solely to the non-random assignment of faculty to class size, sorting by students onto courses on the basis of class size, omitted inputs, the difficulty of courses, or grading policies. The evidence also shows the class size effects are not mitigated for students with greater knowledge of the UK university system, this university in particular, or with greater family wealth.
- Cottle, P. D. & Hart, G. E. (1996). Cooperative learning in the tutorials of a large lecture physics class. *Research in Science Education*, 26(2), 219-231.
- Cuseo, J. (2007). The Empirical Case Against Large Class Size: Adverse Effects on the Teaching, Learning, and Retention of First-Year Students. *Journal of Faculty Development*, 21(1), pp. 1-22.
- Englehart, J. M. (2011). Why class size effects cannot stand alone: Insights from a qualitative exploration. *Learning Environment Research*, 14, 109-121.
- Farrell, E., & Jensen, J. (2002). Rhetoric and research on class size. In R. Indrisano & J. R. Squire (Eds.), *Perspectives on writing: Research, theory, and practice* (pp.307-325). Newark, DE: International Reading Association.
- Herington, C and S. Weaven. (2008, December). Action Research and Reflection on Student Approaches to Learning in Large First Year University Classes, *Australian Educational Researcher*, 35(3)p111-134
 - <http://www.eric.ed.gov/PDFS/EJ837985.pdf>
 - This paper presents an action research approach to exploring methods of improving the learning styles and outcomes of first year university students within large class

environments. The genesis of this project stemmed from an observation that entire tutorial groups were often lethargic in their approach to learning. Following a survey of learning styles, students were exposed to more student-centric teaching styles within tutorial groups, with a view to encouraging deeper student learning and self-regulated learning behaviours. Although the project was successful in motivating students' participation in class activities, no noticeable change to a sustained deeper learning style became evident. The findings suggest that simply motivating students to participate in class does not necessarily alter overall learning styles, at least in the short term. This suggests that the process of "unlearning" previous learning styles may pose a significant problem for instructors and it appears likely that the process of changing from surface to deep learning may require more than a single course intervention. However, there is some evidence that student-centred and self-regulated learning results in a more positive learning experience for both students and teachers. The article concludes with a model of proposed relationships uncovered by the research which deserve further exploration in the quest to provide greater levels of student satisfaction with their higher education experiences.

- Horning, A. (2007). The definitive article on class size. *Journal of the Council of Writing Program Administrators*, 31(1-2), 11-34.
- Keirle, P.A. and R.A. Morgan (2011). Teething Problems in the Academy: negotiating the transition to large-class teaching in the discipline of history, *Journal of Teaching and Learning Practice*, 8(2).
 - <http://www.eric.ed.gov/PDFS/EJ944941.pdf>
 - Study from Australia that addresses shift from small to larger classes (due to budget constraints, increasing enrolments, etc.) and the importance of course design, provides practical pedagogical strategies (including group work) that meet course goals and that are appropriate to the discipline
- Kerr, A. (2011). *Teaching and Learning in Large Classes at Ontario Universities: An Exploratory Study*. Toronto: Higher Education Quality Council of Ontario.
 - Excerpt (p.4): Despite these findings, it is cautioned that the skill and competency of the instructor, the teaching methods used and course design are likely more important factors affecting student learning than class size alone (McKeachie 1990; Biggs, 1999; Atkinson, 2010).
- Kibble, Jonathan D. (2009). A Peer-Led Supplemental Tutorial Project for Medical Physiology: Implementation in a Large Class, *Advances in Physiology Education*, 22(2), pp111-114.
 - The purpose of this study was to evaluate the practicality of implementing a peer-teaching program in a large class (more than 350 students) of medical students and whether such a program is beneficial. Case-based problems were developed by faculty members to facilitate student problem solving and discussion. Voluntary student enrolment was available during the first week of a semester. Tutorials took place during out of class time and were facilitated by peers from the previous class. Tutors were selected for their outstanding performance in physiology; they were provided

with training in facilitation skills and were given a package of model answers. Sixty-eight students enrolled in this pilot program and were organized into groups of approximately eight students. On average, students attended four of six tutorials. Post-tutorial quiz scores were significantly greater than paired pretest scores. Surveys showed that students had high expectations at the outset, which were matched with positive perceptions at the end of the tutorial program; the use of near-peer tutors was especially well received. Tutors also gave high approval ratings for their experiences. In conclusion, the peer tutoring program was logistically straightforward to implement in a large class and was endorsed by the participants.

- Light, Richard J. (2001). *Making the most of college: Students speak their minds*. Cambridge, MA: Harvard UP.
- Lubin, J. (1987). *Conducting Tutorials*. Kensington, NSW: Higher Education Research and Development Society of Australia.
 - http://cte.uwaterloo.ca/teaching_resources/tips/key_strategies_for_tutorials.html
 - Key strategies for conducting tutorials
- Nyquist, J.D., Wulff, D.H. (1996). *Working Effectively With Graduate Assistants*. Thousand Oaks, CA: SAGE Publications.
- Race, P, Brown, S. (1998). *The Lecturer's Toolkit. A practical guide to teaching, learning, and assessment*. London, UK: Kogan Page Limited.
- Sargent, L.D, B.C. Allen, J.A. Frahm, and G. Morris, (2009). Enhancing the Experience of Student Teams in Large Classes: Training Teaching Assistants to Be Coaches, *Journal of Management Education*, (33, 5), p526-552
 - To address the increasing demand for mass undergraduate management education and, at the same time, a greater emphasis on student teamwork, this study outlines the development, delivery, and evaluation of a training intervention designed to build team-coaching skills in teaching assistants. Specifically, "practice-centered" and "problem-centered" techniques were used to provide teaching assistants with experiential learning opportunities to help them develop their skills. The authors evaluated the training intervention using a mixed-method multiple-data source design. Both the teaching assistants being trained as well as the student teams' experiences and perceptions of their coaches' performance were assessed. The evaluation showed that teaching assistants reported finding the program a positive experience. Importantly, students with trained coaches reported higher levels of coaching performance, team functioning, and productivity than those with untrained coaches. The implications of this intervention are discussed.
- Teaching and Learning Unit Tutor Training Guide Series: How to Structure a Tutorial
 - http://tlu.fbe.unimelb.edu.au/pdfs/tutor_resources/structure.pdf
 - University of Melbourne guide on how to lead a tutorial

In reviewing this literature, CTSI looked at a wide range of literature (primarily synthesis articles) to see what the evidence reveals related to class size.

- What is agreed upon in the literature is a focus on the nature of the actual student experience (similar to the National Survey of Student Experience). We also found that our draft framework is congruent with the literature in that there is a focus on learning objectives or goals, and the nature of the learning activities being carried out by students.
- The literature is focused on class size as it relates to an overall course, not tutorial size.
- In summary, the key themes that emerge are that in order to maximize student learning and the overall learning experience we need a combination of:
 - Clear pedagogical goals in course and assignment design
 - Effective pedagogical activities and approaches
 - Skillful, effective instructor behaviours
 - Attention to the learning context

This evidence base is illustrated with a few quotations that may inform our discussion and actions:

#1. Importance of Pedagogical Skill and Competency of Instructor, Teaching Methods and Course Design

Despite these findings, it is cautioned that the skill and competency of the instructor, the teaching methods used and course design are likely more important factors affecting student learning than class size alone. (McKeachie 1990; Biggs, 1999; Atkinson, 2010).

- Kerr, A. (2011, p.4)

#2. Contextual Elements

Because of the variety of elements in the classroom which influence student behaviour, and the interaction among those elements, isolating predictable effects of any one of them, such as class size, is not possible.

-Englehard, J. M. (2008, p. 109)

NOTE: Much of the literature related to class size focuses on the context and discipline of the learning, and the types of learning activities (for example, what students do within a tutorial). We did not find any literature that discusses size related to tutorials. For example, class size related to writing, as below:

#3. Types of Learning Activities

So, while many subject areas may clamor for small classes, writing has, on all these bases, the strongest claim and should have the highest priority. success in college is tied to success in writing, taught well in small classes.

- Horning, A. (2007, p. 13)

NOTE: The literature is also consistent related to the skill of the instructor in impacting how learning experiences are designed, and their impact on student learning. For example, the two examples below illustrate the instructor's role in utilizing effective instructional techniques that impact quality of learning:

#4 Pedagogical Expertise in Varied Class Sizes

Strategies for enhancing student engagement, even in large classes, such as those described by Light (114-117) effectively create a small-class experience.

-Horning, A. (2007, p. 17)

#5 Cooperative Learning in the Tutorials of a Large Lecture Physics Class

In this study, conducted in a large physics class of 200, tutorials became cooperative learning sessions after several weeks. The meetings "appear to have helped the students to achieve at a higher level than expected. In addition, a classroom environment survey was administered... Student reaction to the new tutorial format, as measured by the survey, was positive... Many of the data support the hypothesis that in-class cooperative learning addressed student concerns about the learning environment and was perceived as an effective reform by most students."

-Cottle, P. D & Hart, G. E. (1996, p. 219)

NOTE: Cooperative learning was a practical and effective way to improve students' program of learning activities and to address student concerns about their learning experience in a large physics lecture class. There were higher attendance rates compared to traditional tutorials (increased engagement). Students felt the CL helped them achieve at a higher level.

#6 Complexity of interaction of variables – teacher practices that impact learning

They illustrate that, given the complexity of the classroom environment, the effects of class size on student behaviour cannot be isolated from the various other elements which influence students. Further, they serve a practical purpose as well, by illuminating particular teacher practices which can compensate for influences which could reduce student participation, on-task behaviour and/or comfort, one of which could be large class size.

- Englehard, J. M. (2008, p. 110)

Conclusions

- Given our review of the literature it would be difficult to recommend caps or ranges, except in situations or circumstances where other variables dictate this (e.g., safety in labs).

- Our suggestion is that it would be more prudent to focus on the design of meaningful learning goals and enhancing the skillfulness and preparation of the TA.
- We believe that a practical guide to prepare TAs would be helpful. Such a guide could provide powerful goals and activities that could potentially impact on instructors' and TAs' preparation and delivery of tutorials. We also know from the previous Working Group survey of TAs that there was a theme of not feeling prepared. They commented on the need for discipline specific training connected to appropriate learning activities.

Appendix D: Proposed Framework for Tutorial Categorization and Thresholds for Additional TA Training

Guiding Principles

Tutorials are a key element in supporting student learning at the University of Toronto and should therefore be carefully designed and integrated with core course elements to provide for a coherent student experience. To optimize the quality of tutorials for all involved, it is necessary that instructors and teaching assistants discuss the goals of these sessions, how they should be delivered, the activities that take place during these sessions, and any specific TA training that may support their role. It is also essential that the goals and activities be clearly communicated to students who are participating in tutorials.

The term ‘tutorial’ at the University of Toronto is used to identify interactive and participatory sessions primarily led by Teaching Assistants. During these interactive and participatory tutorial sessions, Teaching Assistants are responsible for gauging student understanding and providing formative feedback, in line with assessment structures and guidelines set by the instructor. The Working Group recommends the following four categories of tutorials:

- Discussion-based sessions
- Skill development sessions
- Q&A and exam/test/assignment review sessions
- Laboratories

These activities are not mutually-exclusive and it is acknowledged that any one tutorial may involve a range of them based on the established learning objectives. The categories are intended to denote the primary activity (or activities) of a given tutorial session.

Course Design

Effective course design requires the consideration of a number of key elements. The following outlines the steps instructors should undertake when designing a course:

1. The instructor should establish course goals (or “learning objectives”)
 - a. What does the instructor hope to achieve through the delivery of this course (e.g. to provide students with an introduction to 19th century American poetry)?
2. The instructor designs his/her course to meet those goals within the constraints of the resources available.
 - a. Will the course be delivered through lectures? Lectures and labs or practicals? Lectures and tutorials? Is there funding for tutorials? How many TAs can be hired within the available allocation of TA hours to the course?
3. If the course design includes tutorials, then the instructor should establish specific goals for the tutorials.

- a. Will the tutorials offer opportunities to discuss course content? Provide opportunities to practice course content? Prepare students for exams, tests, or assignments?
4. The instructor considers the following questions in tutorial design, in light of tutorial goals and resources available:
 - a. How frequently should they meet, given their goals?
 - b. Should they be mandatory or optional?
 - c. Should they be online or live?
 - d. What size should they be, given available resources?
 - e. What strategies should the TAs be expected to use, given tutorial size?
 5. The instructor should consider the types of training or support that TAs will require to effectively meet his/her goals for the tutorials and the strategies that will be used within these sessions. The instructor should also consider how this training or support will be provided – either by the course instructor, the unit, or TATP.

In order to promote the mentoring of TAs there should be ongoing oversight of tutorials by instructors to ensure the success in meeting established course goals.

Tutorial Categories, Objectives, Activities and Related TA Training

For each of the four tutorial categories, the following table outlines high-level learning objectives (the instructor’s goals for the course), the primary type of activities that take can place in this tutorial category, additional activities that may also occur in these sessions, the types of training or support TAs should receive to effectively lead the various tutorial type, and the range of supports that are available to TAs.

(See chart on next page)

	Discussion-Based Sessions	Skill Development Sessions	Q&A Exam/Test/Assignment Review Sessions	Laboratories/Practicals
Learning Objectives¹	<ul style="list-style-type: none"> • Provide opportunities for in-depth discussion of course content and key concepts • Provide opportunities for students to think critically about key issues/course concepts • Remediate gaps in understanding 	<ul style="list-style-type: none"> • Provide opportunities for students to develop, practice and enhance certain skills • Assess student comprehension 	<ul style="list-style-type: none"> • Provide clarification of key course concepts and content • Provide review of course material • Provide more detailed information about course assignments and related expectations • Provide opportunities for students to ask questions /seek clarification • Assess student comprehension 	<ul style="list-style-type: none"> • Provide opportunities for students to perform experiments or tests relating to course content • Provide hands-on activities (often with the aid of materials and equipment) • Provide opportunities for students to make observations and pose questions
Primary Activity	<ul style="list-style-type: none"> • Small and/or large group discussions (TA-led, peer-to-peer) <ul style="list-style-type: none"> ○ May be focused on specific themes/topics ○ May involve the use of case studies, textual analysis, language conversation, journal review ○ May involve a focused discussion of particular texts, cases, problem-sets 	<ul style="list-style-type: none"> • Task-based (hands-on) activities <ul style="list-style-type: none"> ○ May include opportunities to work on problem sets, to participate in language labs and computer labs, to practice writing, to conduct simulations, to role play, to perform ○ May involve peer-to-peer learning opportunities 	<ul style="list-style-type: none"> • Formal or informal sessions responding to student questions (on the spot) and/or addressing common questions received through email/discussion groups, etc. <ul style="list-style-type: none"> ○ Questions/review may focus on any area relating to the course content (e.g. lecture content, readings, problem-sets, cases, expectations for assignments, etc.) 	<ul style="list-style-type: none"> • Presentation of experimental procedures and protocols • Conduct tests or experiments individually or in groups (hands-on activities) <ul style="list-style-type: none"> ○ May include opportunities to collect, analyze and report on results

Additional Activities²	<ul style="list-style-type: none"> • Presentation of material by TAs (to supplement or complement course material) • Presentations by students • Administration of periodic quizzes 	<ul style="list-style-type: none"> • Presentation of material by TAs (to supplement or complement course material) • Presentations by students • Administration of periodic quizzes 	<ul style="list-style-type: none"> • Presentation of material by TAs (to supplement or complement course material) 	<ul style="list-style-type: none"> • Presentation of material by TAs (to supplement or complement course material) • Presentations by students • Administration of periodic quizzes
Training for TAs	<ul style="list-style-type: none"> • Training in discussion-based strategies including how to: facilitate small, large, and/or online group discussions; develop relevant examples/ scenarios/ questions for activities; use materials appropriate to discipline/course content; provide feedback; plan lessons; deliver effective presentations; and manage classrooms. 	<ul style="list-style-type: none"> • Training in: facilitating hands-on activities, how to provide feedback to students, how to deliver effective presentations, how to integrate active and collaborative learning strategies, and classroom management. 	<ul style="list-style-type: none"> • Training in: how to respond to students questions effectively, how to deliver effective presentations, and classroom management. 	<ul style="list-style-type: none"> • Training in: how to deliver demonstrations and presentations; lab safety and protocols; classroom management strategies; how to provide effective feedback. <p>NOTE: New training for TAs on how to supervise labs, based on Health & Safety standards and guidelines, is currently being developed.</p>
Support for TAs	<ul style="list-style-type: none"> • Training sessions on various topics offered through TATP, SGS, and departments/units/divisions • Pedagogical resources (tip sheets, guides) offered through TATP • Support and mentorship provided by the instructor and/or teaching team 			

*NB. The list of categories does not include film screenings, supplemental lectures or sessions exclusively devoted to the administration of tests/exams/quizzes.

1. A *learning objective* is instructor-focused and aims to capture the instructor's goals for the course. A *learning outcome* is student-focused and demonstrates what the student should know or be able to do at the end of a course. Learning outcomes for a particular course are often shared with students on syllabi and typically begin with the phrase: "By the end of this course, you will be able to....". See the Centre for Teaching Support & Innovation's tip sheet on developing learning outcomes at: <http://www.teaching.utoronto.ca/topics/coursedesign/learning-outcomes.htm>
2. Tutorials are defined in this framework by the primary activity that takes place in the sessions. The framework acknowledges that additional activities may also occur in these sessions on a less regular basis. The types of potential *additional activities* are captured in the chart above in relation to each category.

Thresholds for Additional TA Training

In reporting the typical numbers of students in tutorial sections, departments/units surveyed through the *Tutorial Structure and Resource Allocation Survey* sent in February 2013 outlined the normal practice in their departments/units. Variability in tutorial sizes was evident. With an increase in tutorial size beyond the numbers below, TAs should receive appropriate training, including appropriate facilitation skills, to accomplish the pedagogical goals for the tutorial. This training should occur in accordance with the training guidelines recommended in Recommendation #6 of this report.

	Discussion-based sessions	Skills-based sessions	Q&A and exam/test/assignment review sessions	Laboratories/ Practicals
Suggested threshold for additional TA training	~ 30	~ 30	~ 40	Proposed thresholds will be recommended by the Lab Safety Committee taking into account a number of criteria, including the specifics of planned lab activity.

Tutorials: A Practical Guide for Instructors and Teaching Assistants at the University of Toronto

Possible sections to be added [may draw from material from 2010 Tutorial Working Group report and from 2012 framework document] include:

1. What is a tutorial?
2. Designing a course
 - Identifying learning objectives
 - Identifying available resources
 - Selecting appropriate tutorial activities to meet course goals
 - Designing tutorials
 - Working with your teaching team
3. Tutorial strategies and activities (to include examples and scenarios from various disciplines)
 - For discussion-based sessions
 - For skill development sessions
 - For Q&A and exam/test/assignment review sessions
 - For laboratories
4. Communicating tutorial goals and expectations to TAs
 - Effective use of goal setting meetings
 - Including information about respective roles

- Strategies for communicating this information to TAs
- 5. Training and support for TAs
- 6. Mentoring TAs
- 7. Working effectively as a teaching team
- 8. Communicating tutorial goals and expectations to students
 - Including information about students' roles in tutorials (e.g. participation, attendance)
 - Strategies for communicating this information to students

Appendix E: Tutorial Structure and Resource Allocation Survey

Institutions across Ontario are facing increasing enrolments and decreasing resources. In spite of this current scenario, the University of Toronto remains committed to providing a high quality educational experience for its undergraduate students, which includes the delivery of effective tutorials.

In the last round of CUPE 3902 bargaining, there was an agreement to convene a Tutorial Working Group (TWG), co-chaired by a CUPE 3902 representative and the Vice Provost Students. The TWG has as its mandate the production of a broad categorization scheme that captures the range of activities currently assumed under the heading of tutorial (e.g., discussion-based, skill development, exam/test/assignment review sessions, laboratories, etc.). Tutorial activities considered within these categories include: small and large group discussions, presentations by students, the administration of quizzes, hands-on or task-based activities (e.g. as in computer or language labs), student tests or experiments, and the presentation of material by TAs. This categorization does not include activities such as film screenings, supplemental lectures, or sessions exclusively devoted to the administration of tests/quizzes/exams.

The TWG will make recommendations to the Provost regarding:

- best practices for appropriate educational components based on current research;
- the appropriate relationship between pedagogical goals, size, and mode of delivery;
- time required to prepare and deliver various components;
- appropriate training; and,
- an implementation strategy

The TWG is seeking information regarding the ways in which department/divisions currently make decisions about mounting and structuring tutorials and allocating resources to them. This information will inform TWG discussions and recommendations.

Sincerely,

Jill Matus, Vice-Provost, Students and Co-chair, Tutorial Working Group
Morgan Vanek, CUPE 3902

It is the opinion of the TWG that departmental practices vary around (1) who decides whether tutorials will be used in a given course, (2) what considerations go into that decision, (3) what the enrolments for tutorials should be, and, (4) if tutorials are used, what are the intended learning outcomes and what activities they will involve. For example, a course may use “hands-on” labs, which may take place along with, or instead of, other forms of tutorial. A department may have decided that tutorial groups are appropriate for first and second year courses, but not for upper-level courses which involve capstone experiences. In some departments, the decision as to whether tutorials will be used in a course rests with the individual instructor and will be made in relationship to the other activities TAs will carry out. An instructor may decide to build in tutorials only for a certain section of the course and may decide to lead one of the tutorial groups him or herself. In framing the questions that follow, we are interested in the factors that shape tutorial practices in your departments.

1. What considerations guide the allocation of resources for tutorials in your department/division?

Please select all that apply.

- i. Year of course
- ii. Course objectives
- iii. Size of course/lecture section
- iv. Types of learning activities that occur in the tutorial
- v. Other activities related to the course (e.g., learning aid centres)
- vi. Training and support required for Teaching Assistants to lead tutorials
- vii. Available budget
- viii. Review of previous year's allocation practices/outcomes
- ix. Other (please specify_____)

2. Describe the rationale for your department/division's approach you selected in (1). Please provide examples to illustrate.

3. Who makes the decision in your department/division as to whether tutorials will be used? Please select all that apply.

- i. Instructor teaching the course
- ii. Course Coordinator
- iii. Department/Division Chair
- iv. Undergraduate/Graduate Chair
- v. Other (please specify_____)

Please explain *how* each of the people identified above contributes to the decision.

4. Who determines what activities will be carried out in tutorials? Please select all that apply.

- i. Instructor teaching the course
- ii. Course Coordinator
- iii. Department/Division Chair
- iv. Undergraduate/Graduate Chair
- v. Teaching Assistant
- vi. Other (please specify_____)

Please elaborate.

5. Are there currently any norms or practices regarding the size of tutorials in your department/division?

Yes/No

If yes, please describe.

6. Based on current practices in your department/division, we are seeking **your opinion** regarding tutorial activities, size and mode of delivery in relation to the delivery of tutorials. (In the question below, when you are responding about TA led sessions, please assume one TA per session.)

For each of the activities listed below, please indicate how tutorials are currently delivered in your department (e.g. online/in person, weekly/monthly/once per term, required/optional). Please also indicate a size that you believe would enable the delivery of an effective tutorial session in your department/division focused on the specific activity (if applicable).

Primary tutorial activity	Mode of delivery	Tutorial size (in relation to each applicable activity)
a. Discussion-based sessions (e.g. small and/or large group discussions)	<ul style="list-style-type: none"> • Online, in person • Weekly, monthly, once per term • Required, optional 	
b. Skill development sessions (e.g. task-based or hands-on activities)		
c. Q&A and exam, test/assignment review sessions (e.g. responding to student questions or reviewing material in preparation for exams/tests/assignments)		
d. Laboratories (e.g. presentation of experimental procedures and protocols, conducting of tests or experiments)		

Based on your responses above, please provide some specific examples of best practices in your department/division that you believe help to ensure the delivery of effective tutorial sections. Please include examples of formulae used to assign TA hours and activities (as appropriate), and consider objectives, activities, and relevant training required for TAs.

Appendix F: Analysis of Tutorial Structure and Resource Allocation Survey - Summary of Collected Data

An invitation to complete this online survey was sent directly to chairs/associate chairs via email. CTSI sent the survey to 98 individuals (chairs/associate chairs) from across the institution. We received 32 responses (for a total response rate of 33%). Responses were received from the Faculty of Arts & Science (15 units); UTM (3 departments); UTSC (6 departments); Engineering (3 departments), and; Health /Life Sciences (5 units). Response breakdown according to discipline, is as follows:

- Humanities: 15
- Social Sciences: 2
- Health/Life Sciences: 6
- Physical Sciences: 9

Responses were submitted by department chairs (n= 24), associate/undergraduate chairs (n=4), undergraduate coordinators (n=3), and an undergraduate assistant (n=1).

Key themes/findings

Several themes emerged from the data, including:

- Tutorial allocations differ by course and are primarily determined in relation to course objectives, tutorial activities, and course size.
- Budgetary restrictions frequently influence how decisions about tutorials were made each year.
- Differences in tutorial practices and allocation differ across disciplines (in part based on pedagogical goals).
- Individual instructors play a key role in identifying the need for tutorials, in making recommendations regarding TA allocations, and in determining TA roles and responsibilities.
- Training/mentoring of TAs (by course instructors) was identified as a best practice for ensuring successful tutorial delivery.
- Departmental recommendations/preferences for tutorial sizes align with current practices in the majority of units.
 - Responses indicate congruency between what is *believed* (in the opinion of the survey respondent) to be an ideal tutorial size and what is *actually occurring* in practice (within departments and divisions). Variability in relation to tutorial sizes (in terms of beliefs and practice) is evident.

Respondents regularly noted that decisions about tutorial allocations are frequently related to/influenced by pedagogical goals but may also be impacted by level/year of course, safety issues, and sometimes room size.

- Respondents also noted that while tutorial sizes may be established in advance, attendance numbers were frequently much lower.

Data Summary

The following section provides a summary analysis of the data collected for each survey question.

Question 1: What considerations guide the allocation of resources for tutorials in your department/division? Please select all that apply.

Total n=32 (NB: More than one response may have been selected by respondents.)

Considerations Guiding Resource Allocation for Tutorials	# of Responses
Available budget	25
Course objectives	24
Size of course/lecture section	24
Types of learning activities that occur in the tutorial	23
Year of course	20
Review of previous year's allocation practices/outcomes	14
Training and support required for Teaching Assistants to lead tutorials	8
Other activities related to the course (e.g. learning aid centres)	7
Other (please specify) ¹	2

Question 2: Describe the rationale for your department/division's approach you selected in (1). Please provide examples to illustrate.

Total n=32 (NB: More than one response may have been selected by respondents.)

Summary of responses:

The rationale for departmental/divisional approaches to the allocation of tutorial resources mirrored the responses provided in Q1 (see above). Respondents identified the following reasons relating to their rationale:

- Course objectives (n=24)
- Course size (n=17)
- Course assignments/assessments (n=12)
- Available budget/budgetary constraints (n=10)
- Level of course/program (n=2)
- Professional training for TAs (n=2)
- Mandatory nature of course (e.g. required for degree/program) (n=2)
- Graduate funding requirements (n=1)

In rationalizing tutorial resource allocations, many respondents highlighted the particular significance of course objectives, course size, and the importance of offering smaller class sizes in addition to the regular lectures.

Several responses variously described opportunities for: *providing a setting for intense discussion; supporting active classroom discussion; reinforcing complex concepts acquired in lectures; enabling small-group discussion of texts to teach reading/writing skills and strategies; taking up [problem-set] solutions; engaging in philosophical discussion in smaller groups which is vital given the nature of the discipline; encouraging discussion sessions/questions/increased interaction; reviewing materials; and engaging in experiential and “hands-on” learning that may not be available in lectures.*

Respondents who described courses with larger tutorials (approximately 30+) mentioned that multiple TAs would be involved in these sessions.

Question 3 (a): Who makes the decision in your department/division as to whether tutorials will be used? Please select all that apply.

Total n=32 (NB: More than one response may have been selected by respondents.)

Individual Responsible for Making Decisions Regarding the Use of Tutorials	# of Responses
Instructor teaching the course	15
Department/Division Chair	15
Undergraduate/Graduate Chair	8
Other ¹	7
Course Coordinator	4

Question 3(b). Please explain HOW each of the people identified above contributes to the decision.

Summary of responses:

As noted in 3(a), respondents indicated that instructors and departmental/divisional chairs were most often involved in decisions regarding tutorials. While there was some variation in the roles that each of these individuals played across departments/divisions, in general, instructors were responsible for identifying the need for tutorials/TAs and undergraduate/graduate chairs or chairs were responsible for making final decisions and allocating necessary resources. Several respondents noted that there is often discussion/consultation between the instructor, chair, undergraduate/graduate chair and course coordinator when making decisions regarding tutorials.

Respondents further indicated the various roles/responsibilities each of these individuals played, and these included:

- Instructor
 - Identifies learning needs, content and course objectives
 - Identifies the need for tutorials/TAs
 - Makes requests (based on needs) to chair or the undergraduate/graduate chair

- Provides a rationale for the need for tutorials/TAs
- May determine TA allocations/budget in consultation with the chair
- Proposes how to allocate TA hours and responsibilities/duties
- Undergraduate/graduate chair
 - Reviews requests for tutorials/TAs
 - Consults with instructors and/or chair regarding tutorial/TA requests and resources
 - Determines tutorial/TA needs (in consultation with instructors)
 - Provides advice on the allocation of resources
 - Approves requests for tutorial/TAs
- Chair
 - Suggests to instructor/department which courses should have tutorials
 - Consults with instructor, undergraduate/graduate chair, and/or curriculum committee regarding tutorial/TA needs and resources
 - Approves requests for tutorials/TAs
 - Makes decisions regarding allocation of funds for tutorials/TAs
 - Approves allocation of hours/duties for TAs
- Other:
 - Academic Planning Committee
 - Works with instructors to make decisions re: allocation of resources
 - Curriculum Committee
 - Works with chair to review needs and allocate resources
 - All faculty
 - Make decisions collectively (by consensus) re: allocation of resources
 - TA coordinator

Makes decisions re: allocation of resources

Question 4(a): Who determines what activities will be carried out in tutorials? Please select all that apply.

Total n=32 (NB: More than one response may have been selected by respondents.)

Individual Responsible for Determining Tutorial Activities	# of Responses
Instructor teaching the course	23
Course coordinator	12
Teaching assistant	10
Undergraduate/graduate chair	5
Other ¹	2
Department/division chair	1

¹ Two 'Other' responses included: (1) Together the instructor and TA decide on format (i.e., Test preparation). TAs will develop slides if giving a presentation, and (2) Instructors in area and sense of overall needs of program; general departmental practices.

Summary of responses:

As illustrated in the table above, the Instructor teaching the course overwhelmingly determines the activities to be carried out in tutorials, but in combination with other departmental staff. More specifically, almost one-third of respondents reported that the Instructor alone determines tutorial activities. Beyond the instructor as sole decision-maker, responses indicated that a more collaborative exercise in tutorial planning occurs between the instructor, course coordinator, and teaching assistant(s). Additionally, several respondents noted the need for establishing and maintaining continuity across tutorial sections and the role the instructor/course coordinator played in this regard. Open-ended responses provided some additional information on course instructors' determination of these tutorial activities, however, responses conflated tutorial activities (e.g., discussion-based) with tutorial content but a few respondents referred to an instructor's "autonomy" and "freedom". As well, respondents elaborated on the role of the teaching assistant (e.g., the range of tutorial input) noting that teaching assistants are invited to contribute in both tutorial content and activity structure. For example, one respondent noted, "individual TAs have some limited leeway in implementation of course objectives in tutorials", whereas another reported, "Some instructors give their TAs a fair amount of latitude; others control more closely", and finally, "Teaching assistants have some freedom to decide how to structure their tutorial".

Question 5: Are there currently any norms or practices regarding the size of tutorials in your department/division?

Yes	No
25	7

Summary of responses:

In general, respondents indicated that tutorial sizes are typically between 25-50 students in their units. Two respondents indicated the use of smaller tutorials (5-16) for particular pedagogical goals (e.g. experiential group learning activities). A few respondents (all in the Physical Sciences) reported that some tutorials range from 50-100 students. (Note: the survey did not inquire about the number of teaching assistants assigned to these larger tutorials and therefore this report cannot provide any related data, however reference was made to several TAs overseeing tutorials in that size range). Many respondents noted that tutorial objectives and activities are considered when determining tutorial size.

Note: For Q6 (a-d) respondents may have provided multiple responses that reflect a wide range of tutorial offerings and frequencies in their department (e.g., departments offered *all* of weekly, bi-weekly and once per term tutorials). In some cases participants did not address the question in full (e.g., whether the tutorial was required and/or optional), and in other cases the type of tutorial was not applicable to report upon (e.g., no laboratories are held in the department).

Question 6 (a): Discussion-based sessions (e.g. small and/or large group discussions)

Total n=28 (NB: More than one response may have been selected by respondents.)

Frequency	#	Delivery Method	#	Required/Optional	#
Weekly	18	In-person	25	Required	17
Bi-weekly	9	Online	3	Optional	2
Monthly/1x per term	1				

Summary of responses: Tutorial size (in relation to each applicable activity)

Overall, discussion-based tutorials included 25-30 students with both the lowest and highest student numbers reported from one Health Sciences undergraduate coordinator: *“Small group sessions have 1 TA per 7-9 students; second year course has 1 TA- 200 students in tutorial. Others will be anywhere in between.”* Similar to other tutorial sessions, the numbers fluctuate dependent on whether it is required or optional to attend. A few respondents did mention that tutorials would ideally work at less than 20 students: *“It is our experience that a maximum of 20 students is optimal. That size is manageable when full, but allows for meaningful discussion if attendance is poor”*, whereas another respondent reported - on behalf of other instructors in their department – that, *“15-16 is a good size for discussion, especially for first and second-year students who might be daunted to speak up in a larger setting. It is also the size of most of the small classrooms in Sid Smith! In third-year courses, whether delivered by TAs or by the instructor, discussion sections may be larger - eg., 20-25, (splitting a class of 45 in half). From what I have heard from instructors, this is a reasonable approach.* Again, respondents noted that tutorial size is linked to objectives and activities for these sessions and in some circumstances room size played a factor in relation to size. Some respondents noted that attendance numbers are often lower than enrolment numbers for tutorials.

Question 6(b): Skill development sessions (e.g. task-based or hands-on activities)

Total n=20 (NB: More than one response may have been selected by respondents.)

Frequency	#	Delivery Method	#	Required/Optional	#
Weekly	15	In-person	17	Required	10
Bi-weekly	3	Online	3	Optional	5
Monthly/1x per term	3				

Summary of responses: Tutorial size (in relation to each applicable activity)

Overall, skill-development tutorials include 25-30 students, with exceptions, notably for large classes that one respondent suggested does not require smaller-sizes to accommodate the full class: *“It varies. For large courses [course name], the tutorial size can range from 50-100. For medium size courses (i.e., 100-150), the tutorial sizes is typically the entire course (though attendance is much lower). There is no real need for small tutorials for these purposes.”* As well, other tutorial-size ranges were dependent on year and level of the course (e.g., 5-10, 15-60 students, etc.). As noted, one-third of total respondents could not address this type of tutorial and within respondents it appeared that discussion-based type tutorials conflated with skills-based tutorials, therefore it is necessary to be cautious in interpreting responses to the latter. Respondents indicated again that pedagogical goals, year of study and room

size are also key factors in determining tutorial size for skill development sessions. Additionally, it was noted again that attendance at these sessions was often lower than the set enrolment.

Question 6(c): Q&A and exam, test/assignment review sessions. (e.g. responding to student questions or reviewing material in preparation for exams/tests/assignments)

Total n=27 (NB: More than one response may have been selected by respondents.)

Frequency	#	Delivery Method	#	Required/Optional	#
Weekly	13	In-person	23	Required	5
Bi-weekly	4	Online	6	Optional	8
Monthly/1x per term	4				

Summary of responses: Tutorial size (in relation to each applicable activity)

According to respondents, Q&A/exam/test/assignment review-type tutorials include on average 25-40 students, however two departments (one Life Sciences and one Physical Sciences), reported that tutorials for the purpose of review can accommodate larger student numbers, especially for lower year courses (50-100 students). One respondent reported on a Life Science course tutorial that can range from 50-150 students: *“some sections may have two sets of tutorials before each test. They’re 2 hours long, 2 TAs attend each, and they’re a combination of presentations and Q&A. The number of students may vary widely each time. In other sections of [names course], the Q&A sessions before the term tests may only be scheduled for one hour. All sessions are optional. Special test review sessions are scheduled where students are able to review their past tests and ask TA questions. There are generally 2 test review sessions per term test.”* However, in this larger tutorial session there are more teaching assistants overseeing the instructional session, but as noted previously, the survey did not request specific teaching assistant-student ratios for larger-class sizes, so exact numbers are not known and cannot be speculated across all respondent groups. In addition, as reported in the data table, these types of tutorial sessions generally include more ‘optional’ attendance and may result in a lower than anticipated tutorial size. There are also less frequent tutorial sessions offered with a slight increase in the number of monthly/1x per term tutorials, combined with more online offerings.

Respondents noted again that pedagogical goals, year of study and room size were key factors in determining tutorial sizes.

Question 6(d): Laboratories (e.g. presentation of experimental procedures and protocols, conducting of tests or experiments)

Total n=16 (NB: More than one response may have been selected by respondents.)

Frequency	#	Delivery Method	#	Required/Optional	#
Weekly	9	In-person	9	Required	9
Bi-weekly	4	Online	0	Optional	0
Monthly/1x per term	3				

Summary of responses: Tutorial size (in relation to each applicable activity)

Overall, respondents reported that laboratory tutorial sizes are limited by laboratory space, safety issues within these spaces that dictate student numbers, and the intensity of the instruction which may warrant smaller tutorial sizes (e.g., as low as 5-10 students for advanced labs). Pedagogical goals also played a factor in relation to laboratory tutorial sizes. In general, laboratories include 25-30 students per teaching assistant.

Question 6(e): Based on your responses above, please provide some specific examples of best practices in your department/division that you believe help to ensure the delivery of effective tutorial sections. Please include examples of formulae used to assign TA hours and activities (as appropriate), and consider objectives, activities, and relevant training required for TAs.

Total n= 28 (NB: More than one response may have been selected by respondents.)

Summary of responses:

(Note: respondents may have included multiple comments that could be coded into more than one theme/category.)

Respondents identified a wide range of best practices currently in use within their department/division, these include, starting with the most commonly cited:

- Ensuring course TAs are trained (whether through receipt of appropriate course materials (lesson plans, answer keys, marking schemes/rubrics), engagement in TATP training, and/or course-specific training such as WIT and benchmarking sessions) (n=16)
- The use of a TA allocation policy/formula (based on available contract hours or course size) (n=6)
- Ensuring regular communication/meetings between instructors and TAs to discuss course assignment development, course objectives, feedback on course delivery, and to ensure consistency between and across tutorial sections (n=10)
- Writing Instruction for TAs (WIT) is an effective practice (n=4)
- Strive to include faculty-led or monitored tutorials (n=4)
- Ensuring TAs have sufficient preparation time in their contracts (which may include time for attending lectures) (n=4)
- Ensuring regular communication between TAs (n=3)
- Engaging TAs in the development of assignments (n=1)

TA Allocation Policies/Formulas:

Seven respondents indicated that their department utilized allocation policies/formulae when assigning TA hours and activities.

One respondent wrote:

- *There is no one formula that we use to allocate TA hours to courses. For 300-level H courses, instructors in a lecture-based course can generally depend on 120 TA hours per 80 students.*

Lab-based courses receive more TA hours than this — typically at least 140 hours for every 30 students — as do 100- and 200-level courses. The extra TA hours allocated in this way are specifically designed to enable the effective delivery of tutorials and labs. However, we rely on instructors to determine the best means of providing instruction, the best means of assessing student learning, and thus the best way of allocating TA hours to various tasks.

Other responses relating to formulae include:

- [We] *“generally assign 2 TA hours per student in large courses with tutorials and 1 TA hour per student in somewhat smaller courses with no tutorials”. “TAs generally mark the work of 60-75 students”.*
- *“We typically assign 245 hours of TA support per 100 students (in a full course)”.*
- *“...a large 1st or 2nd year course will have 0.9 TA hours per student enrolled but as we move to more ‘mentoring’/labs/PBL/written assignments that number increases to 5-6 TA hours per student to close to 10 TA hours per student in practical courses”.*

Tutorial Caps

Several respondents (n=4) also used this question as an opportunity to report on tutorial delivery issues not captured in the ‘best practices’ themes above. Specifically, they cautioned against the use/requirement of tutorial size caps.

One respondent noted:

- *“If, for some reason, there is a forced cap on the size of the tutorials to a number significantly less than the one currently used (which appears to work well, these tutorial sessions will likely have to be cancelled...”* This respondent noted that tutorials range from 20-50 students in their department (depending on type) with attendance varying from 10 to 45 students on average.

Other comments in response to Question 6(e):

As noted above, the majority of respondents to this question identified specific practices that their department engages in to ensure the effective delivery of tutorials (e.g. training). Some other issues arose in the responses to this question that are not captured above, including:

- One respondent noted the need for additional TA support in their department.
 - One respondent noted *“some inequities in workload across different courses and also for some departments that are historical and difficult to correct”.*
-

Appendix G: Description of Duties and Allocation of Hours Form (DDAH)

CTSI proposes to work with Labour Relations to redesign this form. The form will be converted to an online format with drop-down menus, and additional information—highlighted below in yellow—will be indicated.

Description of Duties and Allocation of Hours Form		
Department	_____	
Course Number and Title	_____	
Tutorial Category	_____ (e.g. Discussion-based session)	
Optional <input type="checkbox"/>	Mandatory <input type="checkbox"/>	
Expected enrolment	_____	
Supervising Professor	_____	
DUTIES (see reverse)	Hours Per Task	
	Initial	Revised
Training		
Add training for [indicate teaching techniques needed]:		
Preparation		
Contact		
Marking/Grading	Estimated Enrolment per T.A.	_____
Other Duties		
TOTAL HOURS		
_____	_____	Date: _____
Prepared By (<i>Supervisor</i>)	Signature	
_____	_____	Date: _____
Approved By (<i>Chair /Designated Authority</i>)	Signature	
_____	_____	Date: _____
Accepted By (<i>Teaching Assistant</i>)	Signature	
MID COURSE REVIEW CHANGES (if any)		
Date of Meeting _____	_____	
	Prepared By (<i>Supervisor</i>)	
_____	_____	
Approved By (<i>Chair /Designated Authority's Signature</i>)	(<i>Teaching Assistant's Signature</i>)	

THE FOLLOWING DUTIES SHOULD BE CONSIDERED WHEN FILLING OUT THE JOB DESCRIPTION:

1. Training

- Attending TA training sessions
- Attending Health and Safety training sessions
- Meetings with supervisor
- Attending TA training for [indicate teaching methods required]

2. Preparation

- Preparing course outline
- Selecting relevant texts
- Preparing discussion outlines
- Preparing handouts
- Preparing reading lists
- Preparing bibliographies
- Designing and preparing tests/examinations
- Preparing assignments/problem sets
- Reading texts/manuals/source materials
- Preparing tutorial/lecture notes
- Preparing/setting up audiovisual materials and equipment
- Developing/maintaining course web site
- Attending supervisor's lectures/seminars
- Attending supervisor's labs/tutorials
- Announcing special seminars/workshops
- Consulting/meeting with course supervisor
- Preparing/setting up laboratory materials

3. Core Duties

3.1 Contact Time

- Conducting lectures
- Conducting tutorials/seminars/practicals
- Conducting special seminars/workshops
- Demonstrating in laboratory
- Demonstrating in language laboratory

- Demonstrating equipment outside class
- Demonstrating problem solving
- Tutoring individuals (not in centre)
- Leading field trips
- Office hours
- Consulting with students outside office hours
- Consulting with students electronically – PLEASE specify media and purpose of contact (e.g., e-mail, newsgroups, web sites, listserves, etc.)

3.2 Marking/Grading

- Language tapes
- Problem sets
- Computer programs
- Data sheets
- Laboratory reports
- Checking lab books
- Book reviews

- Oral presentations
- Demonstrations
- Projects
- Essays (indicate page length)
- Quizzes
- Mid-terms
- End-of-term tests
- Examinations
- Calculating/recording/tabulating grades

4. Other Duties

- Exam/test invigilation
- Meetings with other TAs
- Clerical (e.g., photocopying handouts/ readings)
- Technical support
- Coordinating other TAs, Resource Centres, etc.

NOTES:

1. This list is instructive only. It is not exhaustive nor, of course, will all duties listed here apply to all Departments or to all types of positions.
2. The list is not a substitute for clearly itemizing duties on the front of the form. Select ALL appropriate duties that you are assigning to the employee and that will be required of the employee and transfer to the appropriate section of the form, assigning a sufficient time allowance to each and specifying the total hours of the appointment to be devoted to this activity. Also include any duties you are assigning which are not on the list on this side of the form.
3. When allocating time for marking, indicate the number of individual items to be marked and the time allotted for each item. If the number of students is not known, estimate as accurately as possible and revise as necessary during the mid-course review. For contact hours indicate the number of hours per week and the number of weeks.