Integrated Project – Summer 2024

Actuarial Science Program

Columbia University

Kick Off Session

Tom Murphy (Instructor)

Ira Kastrinsky (Instructor)

Lina Xu (Program Director, Masters in Actuarial Science)

May 20, 2024

Course Objectives - Provide Students With:

- Increased technical skills and consulting-related “soft skills”

- Enhanced opportunity to be successful in the marketplace

Agenda

Highlights and executive summary

Roles of students and mentors

Project outputs

Evaluation

Columbia University in the City of New York

- The course is intended to develop an integrated understanding of the overall program content and actuarial science practices and techniques.
- Students will be responsible for completing a project.
- Mentors have chosen projects in their area of practice.
- The project will require students to integrate and apply the knowledge and skills acquired in their course work in order to:
  - Evaluate the use of actuarial science in a consulting organization (insurance, property & casualty, retirement benefits or health & welfare benefits).
  - Undertake a research project in support of an organizational or business goal.
  - Explore and be able to discuss current developments within the profession in a business-like manner at the graduate level.
- These projects are to be done in a “professional” team environment.
- Students will work with the mentor(s) over the duration of the project.
- Mid-term and Final Presentations will be conducted on campus in a professional consultative setting

Students' responsibilities:

- Produce a statement of work, which will include (1) a scoping document, and (2) a detailed timeline. (More on that later)

- Coordinate weekly meetings with their mentor(s) at a time convenient to mentor(s).

  At the beginning of the project, there may be a need to meet more than once a week. However, once the project stabilizes, students should refrain from checking in more than once a week with mentor(s), unless mentor(s) agrees that more than once a week is acceptable.

- Ultimately act as consultants to mentor(s) by learning from the mentor(s) – through the course of their project - certain technical applications as well as consulting skills

- Agree on a proposed agenda before meeting, monitor timing of meeting, and send and submit meeting agenda and meeting minutes to Canvas after each meeting.

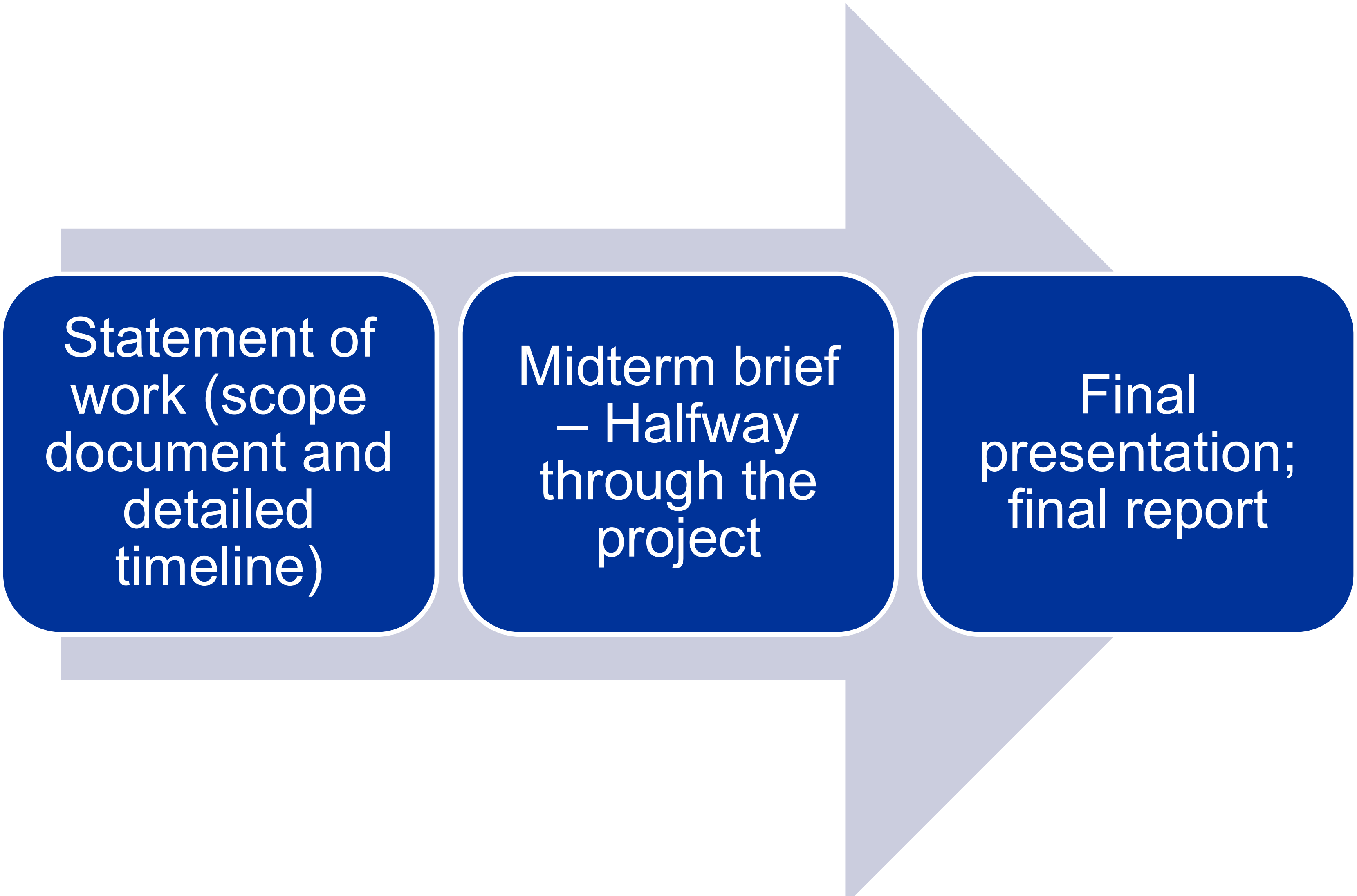
Students' responsibilities (cont.):

- At each meeting,
  - (1) provide a status update report, which describes (a) progress since last week and (b) issues or questions that have arisen (where these include technical issues as well as project issues), and
  - (2) discuss upcoming tasks for the next week. These planned tasks should broadly tie to the detailed timeline, discussed above. This status update report should also be submitted to Canvas each week.
- Meet with the instructors (Ira & Tom) bi-weekly for a check-in conversation
- Present the results of their completed work to-date – in a consultative setting - to an audience of staff and actuaries midway through the project and at the end of the project.
- Provide a comprehensive written report on the project concurrent with the final presentation.

Mentors' responsibilities:

- Act as the client, giving clear expectations on deliverables and organizational needs. Also act as mentors, providing technical guidance and a client's perspective to the students throughout the project.
- Choose a project for the course.
- Provide guidance on the objectives and desired outcomes of the project.
- Expect to spend 1 to 2 hours a week with students to discuss project advancement.
- After students send the meeting minutes to mentor(s) - including agreed-upon next steps - provide feedback as soon as possible to give students sufficient time to focus on and prepare for the next meeting.
- Provide readings/source material to students that relate to their project.
- Provide guidance related to the proper method of presenting project results as a consultant in a business setting.

Flow chart of Integrated Project



The **Statement of Work,** is a 2-3 page report that must cover the following items:

- Project title
- List of team members
- Contact information: email addresses and phone numbers
- Introduction – business problem client wants to solve
- Objective of work – describe project at a high level and how it will help the client solve his / her problem
- Scope of services – list all of the major steps you'll take and what data you will need from the client
- Handling of proprietary information (if applicable) - If your project contains proprietary information, your recommendations for handling it.
- Proposed learning outcomes: Statements addressing how you feel that your completion of the proposed project will successfully demonstrate your development as a future actuary

The **Statement of Work,** also must include a spreadsheet that contains a detailed timeline.

The **final report** [PDF] must contain the following items:

- Introduction and scope
- Executive summary
- Detailed model description
- Development of assumptions
- Sensitivity tests
- Lessons learned
- Readings
- Appendices (if applicable), which might contain detailed results
- Footnotes

The **midterm and final presentation** [PPT] should provide an appropriate summary of the **final report** elements as they would pertain to the work performed to-date.

Summer 2024 Calendar

Week #	Week Beginning	Task
1	5/20	Program Kickoff (Monday, 5/20)
2	5/27	Intro; Mentor Provides Project Description; Begin Work on Project
3	6/3	First Draft of Statement of Work (SOW) - Part 1; Work on Project
4	6/10	Finalize SOW - Part 1, First Draft of SOW - Part 2 (detailed timeline); Work on Project
5	6/17	Finalize SOW - Part 2, Work on Project
6	6/24	Work on Project
7	7/1	Midterm Presentation (Monday 7/1)
8	7/8	Work on Project
9	7/15	Work on Project
10	7/22	Work on Project
11	7/29	Work on Project
12	8/5	Final Presentation (Tuesday 8/6) & Final Report Due

Criteria used in the evaluation will include:

- Quality of written work
- Demonstrated conceptual ability (in group meetings, in responding to comments and questions, etc.)
- Ability to meet deadlines
- Ability to work well with fellow team member(s)
- Quality of formal and informal oral briefings
- Feedback from mentor
- Overall professionalism and ethics
- Quality of final report and briefings
- Other qualitative assessments

Thoughts on professionalism

- Dictionary says: "Professionalism most commonly means the state or practice of doing one's job with skill, competence, ethics, and courtesy."
- Actuaries are obviously expected to perform their work in a highly competent manner but professionalism means more than that
- Actuaries will interact with many individuals and organizations in their work lives – colleagues, clients, etc.
- In this course, you have will be interacting with your team members, mentors and instructors
- You will be expected to be a reliable member of your team and a responsible participant in the course – which will require:
  - A meaningful and equitable contribution to your team's work product.
  - Consistent, on-time attendance at all scheduled meetings and de-briefs – unless your client (mentors) or instructors have been notified – in advance – of an unavoidable conflict that would preclude your attendance.
  - Fully supporting and participating in your team's effort in presenting your mid-term and final oral update and preparing your final written report.

Summer 2024 Student Teams & Mentor Contact Information

Group #	Students	UNI	Mentors	Mentor Email
1	Taoyu Zhu Muqing Tang Xiaotong Deng Alana Berson	tz2573 mt3738 Xd2309 arb2314	Darryl Wagner Beibei Li Yijun Guo Bo Zhao	dawagner@deloitte.com beili@deloitte.com yijguo@deloitte.com bozhao6@deloitte.com
2	Ruizhe Qiu Tianxiang Zheng Luyang Feng Orange Ao	rq2194 tz2582 Lf2786 ya2538	Carlos Arocha	ca@arochaandassociates.ch
3	Zheng Gao Xiaochen Chen Suleman Sadiq Xuan Ma	zg2483 xc2714 ss6982 xm2315	Jack Zheng Andy Ren Sam Su	jack.zheng@ey.com andy.ren1@ey.com Sam.su@ey.com

Columbia Staff Contact Information

Staff	E-Mail	Phone #
Lina Xu	lina.xu@columbia.edu	(347) 880-2545
Ira Kastrinsky	ik2379@columbia.edu	(973) 545-6361
Tom Murphy	tm2980@columbia.edu	(201) 390-1639
Vin Sibilia	vs2659@columbia.edu	

Q & A

Thank you!