

**SYLLABUS (preliminary)**  
**CORPORATE TRANSACTIONS AND FINANCIAL MODELLING (3 credits)**  
**SPRING 2024**

**B 8019-001 – T 9:00am-12:15pm (Kravis 680)**

**B 8019-002 – W 9:00am-12:15pm (Kravis 680)**

**B 8019-003 – TR 9:00am-12:15pm (Kravis 680)**

**NO CLASS: T 23<sup>rd</sup> Jan/ W 24<sup>th</sup> Jan/ TR 25<sup>th</sup> Jan**

**MAKEUP CLASS ALL SECTIONS: F 2<sup>nd</sup> Feb 10.30am-1.45pm (GEF 620)**

**No auditors**

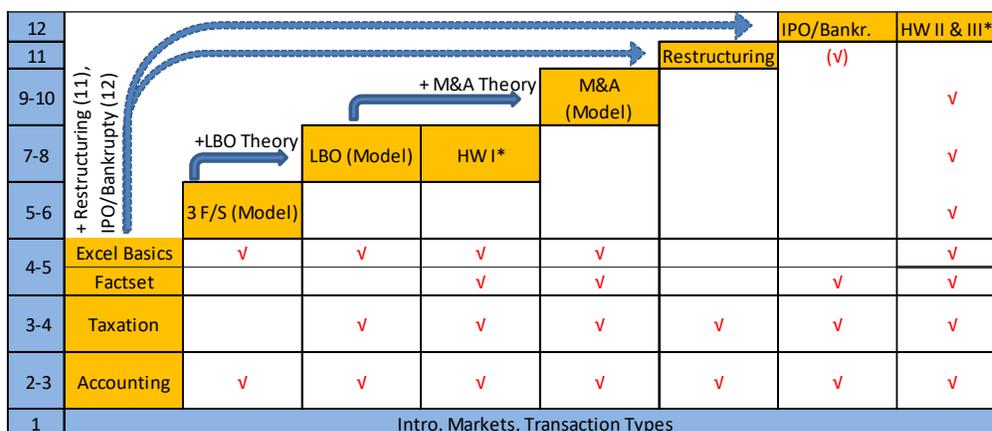
**No temporary/permanent switching between sections**

**I. CONTACT DETAILS**

Prof. Anne Heinrichs, CFA  
ah3245@columbia.edu  
312-613-1530 (cell)  
Office hours/reviews: Fridays (time to be announced)

**II. B 8019 ROADMAP**

12									
11									
9-10	+ Restructuring (11), IPO/Bankruptcy (12)								
7-8									
5-6									
4-5									
3-4									
2-3									
1									



**III. COURSE OVERVIEW**

The main objective of “Corporate Transactions and Financial Modelling” is for you to acquire a lasting ability to successfully understand, analyze, model, value and creatively think about e.g. LBO, M&A and restructuring activities. Towards this end, we will (1) explore accounting, regulatory, taxation, structural, institutional and process-related aspects of different transaction types, (2) develop advanced valuation and financial statements analysis skills, and (3) discuss (step-by-step) how to prepare full-blown operating and financial Excel models. We use these models to investigate the impact of different deal structures, accounting choices, operating assumptions and financing decisions, e.g. on firm value, liquidity, profitability, returns, and other financial statement ratios. The course draws on basic valuation concepts and financial statement analysis skills taught in your core classes. We advance them in various ways. First, we integrate institutional and process-related details into our study of corporate transactions. Second, we extend accounting, taxation and regulatory knowledge to equip you for deal-specific analysis. Third, in Excel, we work through and understand full-blown M&A, LBO and -time permitting- bankruptcy models (with integrated B/S, I/S and CFS) to study the feasibility

of deals. Throughout the course, we use databases that are commonly used by practitioners and place special emphasis on real-world applications. For example, you receive your own FactSet Desktop license including Excel add-in and we incorporate FactSet applications into the course. The course’s overarching goal is for you to obtain an advanced toolbox that helps to succeed in a role in IB, PE, consulting, investment management, corporate management or entrepreneurship with required transaction skills and knowledge.

Note: This is not a pure modeling class. Approximately 40-50% of the course content involves modelling. Building an integrated full-blown 3 F/S LBO model from scratch can take an experienced modeler a full day. To use our classroom time efficiently, we will use three pre-built Excel models, discuss them step-by-step, demonstrate selected model-related Excel functions, and you become equipped with a recipe how to create such models from scratch. If you are looking for a pure modelling class, I highly recommend Wall Street Prep’s online modelling classes. You can pace it according to your own modelling speed and build the model while going through the online class.

#### IV. COURSE PREREQUISITES

Academic prerequisites are strong fundamental backgrounds in financial accounting (e.g. B5001 or B6001) and corporate finance (e.g. B5300 or B6300) and at least one elective course in financial accounting or corporate finance taken over the past 5 years. Your grades in these three courses should average H- or better, and you need to have a good intuitive understanding of the material in the courses.

Technical prerequisites are basic Windows Excel skills and the availability of a windows-based laptop. Add-ins that we use in this course do not work properly on a Mac (*even if bootable into Windows*). If you do not have a windows-based laptop, do not bid for this course. Any model-specific Excel content will be covered in class expecting that you are familiar with basic Excel functions listed in the ‘Excel pre-assessment’ form at the end of this syllabus. If you like to refresh your Excel skills before our first class, please take Wall Street Prep’s Excel Crash Course.

#### V. COURSE MATERIAL

No textbook or physical course package is required for this course. Required readings are available on CANVAS. CANVAS also provides classroom slides, journal and newspaper articles, documents from corporate transactions, excel files and any additional resources. Additional resources elaborate upon course topics and provide deeper insights into classroom discussions (but will not be directly tested in graded work in this course).

#### VI. GRADING

Your performance is evaluated based on four types of deliverables:

Deliverables			
3 Homework Assignments		3 x 12% =	36%
1 Take-home Final			34%
5 Online Mini-Quizzes		5 x 4% =	20%
Class Participation			10%
<b>TOTAL</b>			<b>100%</b>

Your final class grade is determined relative to the performance of other students in the course. I will use the below distribution to assign letter grades but reserve the right to make adjustments.

Letter Grade	GPA	% of students (target)
H+	11	2%
H, H-	10, 9	48%
HP+, HP, HP-	8, 7, 6	45%
P1+ or below	5 or below	5%

Any regrading requests must be submitted in writing within 5 days after points for your graded work are posted on CANVAS. Your request needs to explain why you think you deserve more points. I will then regrade your full submission and your points can go up or down.

## VII. GRADED WORK

### 3 Homework Assignments (designation type A: **group/group**)

Three equally-weighted homework assignments account for  $3 \times 12\% = 36\%$  of your course grade and should take you circa  $3 \times 4 \text{ hours} = 12$  hours to complete. They build upon material that we covered in the prior class(es) and might introduce new content that we will discuss in the next class. Homework assignments can comprise of short answer questions, modelling tasks, brief case scenarios and database research exercises. **You are required to discuss and prepare homework in a group of 3-5 people.** Each person in a group needs to be actively enrolled in B8019 in Spring 2024 and must actively contribute to the discussion and preparation of homework solutions. **Discussion groups need to be formed by Feb 3rd, 5pm** and it is your responsibility to reach out to and team up with others to form a group (executive functioning skills). On Jan 13<sup>th</sup> I will share access to a google spreadsheet where the names of group members should be entered until Feb 3<sup>rd</sup>, 5pm. **Each group needs to nominate one group member to upload the group's answer files on Canvas. Per homework, there will only be one submission per group and the 3-5 students in the group will get the same grade based on the uploaded group submission.** Submissions by larger/smaller groups (or individuals) will not be graded and result in zero points for the assignment. Assignments are available on CANVAS and submissions are electronically due on CANVAS on the following days:

	<u>Available:</u>	<u>Due:</u>
• Homework 1:	Feb 8 (9pm)	Feb 20 p.1 (6am)/Mar 19 p.2 (6am)
• Homework 2:	Mar 21 (9pm)	Apr 23 (6am)
• Homework 3:	Mar 21 (9pm)	Apr 23 (6am)

Note: If you like HW2 to be graded early, you need to submit answers by Apr 2 6am

### Take-home final (designation type C: **individual/individual**)

The take-home final accounts for 34% of your course grade, needs to be individually prepared and completed and I expect you to spend circa 8 hours on it. Similar to the homework assignments, the final exam can be a mix of short answer questions, modelling tasks, brief case scenarios and database research exercises. You can choose a 48-hour period between Apr 19 (5pm) – Apr 30 (10am) to work on the final. All classes, except class 12 (Apr 25) are exam relevant. The exam is fully administered through Canvas. On your chosen start day, you go to 'assignments' > 'final exam' and start the exam by clicking on 'take the quiz'. After that, you have 48 hours to complete and submit your answers (latest submission possible is Apr 30 at 10am). The exam is designated type C (individual/individual) and you cannot talk with anyone (except myself) about the exam, before and after your submission.

### 5 Mini Quizzes (designation type C: **individual/individual**)

Five mini online quizzes account for 20% of your course grade. Each mini quiz carries the same weight towards your final grade (4%) and can consist of true/false and multiple-choice

questions (MCQs). Quizzes can be started on CANVAS within the below mentioned periods and have a time limit of one hour during which you need to select your answers.

- Quiz 1: Feb 1 (9pm) – Feb 6 (6am)
- Quiz 2: Feb 8 (9pm) – Feb 13 (6am)
- Quiz 3: Feb 22 (9pm) – Feb 27 (6am)
- Quiz 4: Mar 14 (9pm) – Mar 19 (6am)
- Quiz 5: Apr 4 (9pm) – Apr 9 (6am)

Per mini quiz, at least two thirds of the questions build upon material covered in prior class(es). Any remaining questions are based on required pre-readings for the next class, if any. The weekly pre-readings, if any, take circa 1 hour to complete.

### **Class Participation**

Participation accounts for 10% of your course grade. *You start the course with a full participation credit of 10%.* I only reduce this credit if you come late, have unexcused absences, or disrupt class. *Without* grading the quality or quantity of contributions, I seek and encourage active classroom debate and rely on your participation. Occasionally, I may cold call.

### **Absences**

When you miss class for an excused conflict, you need to send an email with attached documentation to: [absentB8019@gsb.columbia.edu](mailto:absentB8019@gsb.columbia.edu).

You will receive a response confirming that your email was received and will be processed. An assistant will record excused absences according to the core policy for excused absences (see below).

Excused absences are: illness (provide letter by medical professional indicating dates of illness), religious observance (max. 1 class per semester), military service (provide: statement of service), court appearance (provide: legal summons), family emergencies, such as death or serious illness of immediate family member (provide explanation, excused on case by case basis)

For unexcused absences (e.g. recruiting, travels, conferences, student activities, etc.), please **DO NOT** send any emails out. An email for unexcused absences would not be a smart use of time because it makes no difference to your grade.

Students who miss more than 33% of classes due to unexcused absences will receive a maximum grade of P. Students who miss more than 50% due to unexcused absences will receive an F in the course. The percentages are applied to the total number of classes in the course excluding classes that you have an excused absence for (e.g. 12-2=10).

## **VIII. WAITLISTED STUDENTS (ONLY) - MUST READ**

CANVAS material is exclusively for enrolled students, no exceptions. If you are currently waitlisted for this course, you cannot get access to CANVAS until you are officially enrolled in the course.

Except for classes 1 and 2, classes are only for enrolled students. Classes 1 and 2 are also open to the top 3 waitlisted students (=> OSA maintains this list – please check your status with them, I don't have access to the list) and must be attended to be promoted from the

waitlist. If you are on waitlist position 4 or lower, please do NOT come to class 1 as you will not be able to attend.

If you are among the top 3 waitlisted students for a given section as of 1/12/2024 at 9am, I will automatically arrange the FactSet desktop license with Excel-plugin in for you.

- If you become officially enrolled before the beginning of the first class (at which point you will automatically have access to our CANVAS site), you are responsible for all deliverables (at the regular due dates)
- If you do NOT become officially enrolled before the beginning of the third class, you will not be able to attend classes after Feb 2. No exceptions (no auditing).

## IX. SOFTWARE INSTALLATION

Before the start of the **third** class, please install Factset's desktop version including Excel add-in on your laptop. I will send out a welcome email with more instructions on Jan 13th.

## X. HONOR CODE

All students are expected to abide to Columbia's Honor Code stating: "As a lifelong member of the Columbia Business School community, I adhere to the principles of truth, integrity and respect. I will not lie, cheat, steal or tolerate those who do". All students are subject to the Honor Code for all of their academic work. Failure to comply with the Honor Code will not be tolerated. A violation that relates to our course will lead to an F grade in the course and may result in Dean's Discipline. Course materials (slides, videos, assignments, quizzes, exam, etc) are for your use in this course only. Without my prior written approval, course materials may not be shared with anyone. Anyone includes other students even if they are taking a different section of the same course. You may also not upload any course materials to external sites or post them for public commentary.

## XI. LAPTOPS, PHONES, PDAs, TABLETS

Laptops: Classes 3-11 include financial modelling content or database research. You might find it helpful to follow Excel and database demonstrations on your laptop. Please bring your laptop to these classes.

Mobile phone functionality should be fully powered off before we start class. Cellphone use is not permitted during class. If you need to be reachable immediately during class (e.g. your wife is going into labor any minute), please let me know before class and you can keep phone & volume turned on, of course.

## XII. CORE CULTURE

The below principles apply to our course.

**Present:** Be on time and present in class. Attendance is tracked.

**Prepared:** Complete required pre-work and bring nameplates. Occasionally, I will cold call.

**Participating:** Participate constructively and only use electronic devices as specified in section XI. of the syllabus.

### XIII. CORE OVERLAP

Core Class	Content Link	
	Core	Elective: B 8018
Corporate Finance (B5300 or B6300)	valuation of firms/stocks/bonds, risk-return concepts, capital raising, DCF	full-blown operating and financing models for valuation and analysis of LBO, M&A, IPO and restructuring activities.
Financial Accounting (B5001 or B6001)	financial statement analysis, ratio analysis, inter-company investments	purchase/equity method of accounting, consolidation, recap accounting, deal taxation, push-down accounting, pensions, ESOPs
Managerial Economics (B5200 or B6200)	supply-demand theory, market settings: monopoly vs. competitive models	antitrust for LBOs and M&As, revenue forecasting
Managerial Statistics (B5100 or B6100)	regression analysis and descriptive statistics	forecasting techniques, valuation concepts, economic overview of transactions
Strategy Formulation (B5502 or B6502)	cost leadership, differentiation, diversification, competitive advantage	rationale for corporate transactions, IPO equity story, M&A synergies, LBO bidding process

### XIV. COURSE SYNOPSIS

“Corporate Transactions and Financial Modelling” begins with a market overview and we develop fundamental skills to analyze and structure transactions. We then cover the basics of financial modeling and prepare a non-transactional three financial statement model. During the subsequent classes, we focus on the analysis and modelling aspects of specific transaction types (see course outline). Where applicable, we discuss findings of transactions-related research studies and we may welcome one or two guest speakers to share with us their practical insights.

### XV. COURSE OUTLINE (yellow (grey) = main (minor) class topic)

<p><b>30-Jan</b> <b>31-Jan</b> <b>1-Feb</b></p>	<p><b>CLASS 1</b></p> <ul style="list-style-type: none"> <li>▪ <b>Introduction &amp; clarifying course expectations</b></li> <li>▪ <b>Transaction Types</b></li> </ul> <p>Discuss current market conditions, investigate economic trends and relevant conditions for transactions, explore rationales for transaction types, study deal characteristics</p> <ul style="list-style-type: none"> <li>▪ <b>Accounting</b></li> </ul> <p>Accounting (for transactions) – how does it matter for a deal? Intercompany investments</p>
<p><b>2-Feb</b></p>	<p><b>CLASS 2</b></p> <ul style="list-style-type: none"> <li>▪ <b>Accounting (continued from class 1)</b></li> </ul> <p>Discuss intercompany-investments, acquisition method, asset step-ups, goodwill, non-controlling interests, push-down accounting, accounting for deal costs, employee stock options, stockholder’s equity account</p>

6-Feb 7-Feb 8-Feb	<p><b>CLASS 3 (Feb 6: mini quiz 1 due on CANVAS by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>Accounting (continued from class 2)</u> - (diluted) EPS, EPS rule of thumb</li> <li>▪ <u>Taxation</u></li> </ul> <p>Introduce the basics of corporate taxation and analyze how deal structure impacts (federal) taxation and consequently the feasibility of deals; discuss e.g. C vs. S corporations, asset vs. stock deals, Sec. 338 for C corps, asset step-ups</p>
13-Feb 14-Feb 15-Feb	<p><b>CLASS 4 (Feb 13: mini quiz 2 due on CANVAS by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>Taxation (continued from class 3)</u></li> </ul> <p>Discuss e.g. Sec 338 with NOLs, Sec 338 for S corps, TRAs, Sec. 382, Sec. 368, tax-free exits, type “A”-“D” reorganization</p>
20-Feb 21-Feb 22-Feb	<p><b>CLASS 5 (Feb 20: HW1 part 1 due on CANVAS by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>Modelling Essentials</u></li> </ul> <p>Introduce FactSet’s Excel add-in, discuss Macros and adjust excel settings, study layouts of financial/operating models and discuss their purpose/limitations</p> <ul style="list-style-type: none"> <li>▪ <u>Basic 3 Financial Statement Model</u></li> </ul> <p>Introduction to build a mini valuation model with integrated B/S, I/S and CFS</p>
27-Feb 28-Feb 1-Mar	<p><b>CLASS 6 (Feb 27: mini quiz 3 due on CANVAS by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>Basic 3 Financial Statement Model (continued from class 5)</u></li> </ul> <p>Understand how to build a mini valuation model with integrated B/S, I/S, CFS sensitivity analysis; data tables</p>
19-Mar 20-Mar 21-Mar	<p><b>CLASS 7 (Mar 19: mini quiz 4 due on CANVAS by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>LBO Intro &amp; Model</u></li> </ul> <ul style="list-style-type: none"> <li>➤ Discuss LBO characteristics, understand and analyze full-blown LBO model in Excel with integrated B/S, I/S and CFS; input and output sheets; working schedules for debt/interest, equity, depreciation and working capital; cash sweep</li> </ul>
26-Mar 27-Mar 28-Mar	<p><b>CLASS 8 (Mar 26: HW1 part 2 due on Canvas by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>LBO Model (continued from class 7)</u></li> </ul> <ul style="list-style-type: none"> <li>➤ Finish LBO topics from class 7, further explore scenarios toggle, error checking, auditing and troubleshooting techniques</li> <li>➤ Apply and extend accounting and taxation concepts</li> <li>➤ Compare different forecasting methods, discuss valuation under different deal structures</li> </ul>
2-Apr 3-Apr 4-Apr	<p><b>CLASS 9 (Apr 2: optional for early grading, HW2 on CANVAS by 6am)</b></p> <ul style="list-style-type: none"> <li>▪ <u>M&amp;A Intro</u></li> </ul> <p>Learn how to mitigate information asymmetry and deal with conflicts of interest between signing/closing, discuss mechanisms such as working capital adjustments, collar arrangements, escrow accounts, earnout agreements, familiarize yourself with the M&amp;A process/documents/consideration</p>

<p>9-Apr 10-Apr 11-Apr</p>	<p><b>CLASS 10 (Apr 9: mini quiz 5 due on CANVAS by 10am)</b>  <b>▪ M&amp;A Model</b>  Build and analyze an M&amp;A model in Excel to train the use of scenario toggles for different financing structures and operating conditions; FactSet’s FDS codes; EPS accretion/dilution; working schedules and sensitivity analysis, error checking, auditing and troubleshooting techniques</p>
<p>16-Apr 17-Apr 18-Apr</p>	<p><b>CLASS 11 =&gt; COURSE EVALUATIONS (Final Exam available: 20 Apr)</b>  <b>▪ Restructuring</b>  Discuss alternative exit and restructuring strategies such as divestiture, spin-off, equity carve-out, (cash rich) split off and tracking stock; study selected topics related to taxation and accounting of distressed firms (e.g. NOLs, COLs); learn how to monetize spin-off/split-offs</p>
<p>23-Apr 24-Apr 25-Apr</p>	<p><b>CLASS 12 (Apr 23: HW 2 &amp; 3 due on CANVAS by 6am)</b>  <b>▪ Selected IPO &amp; Bankruptcy Topics</b>  Discuss IPO process, pricing, underwriting and special features. Introduce bankruptcy process (chapter 11), debt restructuring, fresh-start accounting  <b>▪ Intro to: Bankruptcy Model (time permitting)</b></p>

## XVI. EXCEL PRE-ASSESSMENT

This course is taught using Windows Excel 2016. All model-specific Excel content will be covered in class expecting that you are familiar with the basic Excel functions listed below:

- Change options and settings
- Enter formulas, text, and numbers
- Reference and anchor cells, rows, columns
- Paste special (e.g. formulas, formats, values)
- Insert, edit, copy, hide, (un)group, delete, move and name: worksheets, rows, columns
- Format cells (font, fills, borders, alignment) and use custom number formats
- Conditional formatting
- Header, footer, grid lines, freezing columns/rows
- Lookup functions, e.g. VLOOKUP and HLOOKUP
- Logical operators, e.g. IF, OR, AND, etc.
- Scenario functions e.g. CHOOSE, OFFSET, and Excel’s built-in scenario manager
- Error-checking formulas, e.g. IFERROR and ISERROR
- Goal seek
- Data tables
- Format graphs/charts (change colors, axes, data labels, tickers, chart titles, legends)
- Set print areas, view page breaks, show print previews

## **XVII. INCLUSION, ACCOMMODATIONS, AND SUPPORT FOR STUDENTS**

- At Columbia Business School, we believe that diversity strengthens any community or business model and brings it greater success. Columbia Business School is committed to providing all students with the equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias on the basis of gender, sexual orientation, race, ethnicity, socioeconomic status, or ability.
- Columbia Business School will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Columbia University's Office of Disability Services for information about registration. Students seeking accommodation in the classroom may obtain information on the services offered by Columbia University's Office of Disability Services online at [www.health.columbia.edu/docs/services/ods/index.html](http://www.health.columbia.edu/docs/services/ods/index.html) or by contacting (212) 854-2388.
- Columbia Business School is committed to maintaining a safe environment for students, staff and faculty. Because of this commitment and because of federal and state regulations, we must advise you that if you tell any of your instructors about sexual harassment or gender-based misconduct involving a member of the campus community, your instructor is required to report this information to a Title IX Coordinator. They will treat this information as private, but will need to follow up with you and possibly look into the matter. Counseling and Psychological Services, the Office of the University Chaplain, and the Ombuds Office for Gender-Based Misconduct are confidential resources available for students, staff and faculty. "Gender-based misconduct" includes sexual assault, stalking, sexual harassment, dating violence, domestic violence, sexual exploitation, and gender-based harassment. For more information, see <http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students>.