



**Graduate Board**  
**Room 57, Stodder Hall**  
**Thursday, May 9, 2019**  
**3:00 pm - refreshments**  
**3:15 pm - meeting**

AGENDA

1. Review/approval of the April 25, 2019 Graduate Board minutes
2. Review/approval of the April 30, 2019 Curriculum Committee report
3. Announcements/updates:
  - Graduate Commencement – May 10
  - NAS visit (May 21-22); See: <https://umaine.edu/risingtide/conversations-for-change/>
  - Fall 2019 orientation planning
4. Review of Graduate Board membership
5. Election of 2019-20 Executive Committee
6. Assessment of graduate programs – Dr. Debra Allen and Amanda Barrington, Office of Institutional Research and Assessment
7. Addition of a 4+2 track to the existing 4+1 track in the School of Economics
8. Review of proposed 4+1 track Computer Science
9. Review/approval of proposed graduate specialization in Conservation Science
10. New collaborative proposals in the MBA program
11. Review of proposal for a MS in Data Science and Engineering - redux
12. Items arising



**Graduate Board  
Room 57, Stodder Hall  
Thursday, April 25, 2019  
3:00 pm – refreshments  
3:15 pm – meeting**

Members In Attendance: J. Ballinger, K. Beard, J. Bonnet, D. Bousfield, T. Bowden, S. Butler, S. Delcourt, D. Dryer, S. Ell, A. Daley on behalf of K. Evans, J. Ferland, S. Jain, M. Kienzler, K. Kreutz, J. McClymer, S. Ohno, E. Pandiscio, P. Poirier, A. Reeve, L. Rickard, D. Rooks-Ellis, C. Sponarski, M. Tajvedi, K. Vekasi, C. Villacorta Gonzales, V. Weaver.

Guest: Penny Rheingans

Minutes

Meeting called to order at 3:20pm

1. Review/approval of the February 28, 2019 Graduate Board minutes  
Omissions from last meeting – Carlos Villacorta should be listed as attending.  
Minutes approved unanimously with the friendly amendment.
2. Review/approval of the March 5 and April 9, 2019 Curriculum Committee reports:

**March meeting:**

CIA 529 – Marine Turbulence  
BUA 670 Managerial Marketing

**April meeting:**

FSN 580 – Food Chemistry  
AVS 555 – Animal Nutrition  
AVS 556 – Animal Nutrition Laboratory  
COS 565 – Data Visualization

Delcourt noted that all revisions requested by the Graduate Curriculum Committee have been made and are reflected in the curriculum packet.

Curriculum committee report unanimously approved.

3. Announcements/updates:

Candlelight vigil tonight at 5:00pm on steps of library – for victims in Sri Lanka attack on Easter Sunday.

Congratulations to Graduate Board members (current and recent) who have recently been promoted to:

**Associate Professor with tenure:**

Ian Mette

Judith Rosenbaum

Carlos Villacorta

Jacqueline Gill

Hamish Greig

Mehdi Tajvidi

**Full Professor**

Shaleen Jain

Pank Argrawal

Pat Poirier

- 3MT competition finals – final competition on March 25 – 11 finalists  
Scott shared Cameron Hodgdon's winning presentation video  
Students had 2 months to get their presentation ready. Finals were right after spring break. We would like to grow this program to 20-25 students.  
Christel Peters, the OVPRDGS communications coordinator, and Peter Schilling and Karen Pelletreau from CITL assisted with coaching.  
3MT is co-sponsored by the Graduate School and the Foster Center for Student Innovation and is an outstanding way for students to develop the ability to discuss their dissertation research concisely and in a publicly-accessible way.
- UMSS feedback – Steering Committee met last week  
Judging is a continuing issue – we need some type of software to help plan judging so that it is easier to sign up and assign judges.  
Should the event be at the Cross Center – or here on campus?

Sandy Butler – asked about the date & when it was announced – was it announced late?

Day of the week – is there a plan to change the day of the week? It has

gone to faculty senate – this year students were encouraged to attend. Some discussion circulated about the possibility of having it on Maine Day.

Some of the oral presentations were not very well attended. Location may have been an issue. They were harder to find in the back halls.

S. Delcourt asked what day of the week would be best?

Eric Pandiscio - What is the largest issue with the event? How many people go to the event? Is there a saturation point? It would be nice if there were more folks in the audience so that folks could showcase their work.

Deborah Rooks- Ellis – what was the reason for the move to the Cross Center? No room big enough on campus.

S. Delcourt – the thought was to get more people from the community to attend by holding it at the Cross Center. It was advertised this year through the Rise Center & outreach to local schools. Also were radio spots, banners, and an ad on the Cross Center marquee.

Wondering if there would be any better turn out on Saturday / Sunday

Kate Beard – idea – to coordinate with Maine Science Day.

S. Delcourt – will share the feedback with the committee.

- National Academy of Sciences visit (May 21-22) – link was sent out by Scott – a number of events & panels to focus on diversity & mentoring, related to the recent report on *STEM Education for the 21<sup>st</sup> Century*.
- Graduate Commencement – May 10 Graduate School  
Similar program and stage party as the Undergraduate Commencement – College deans will sit with the students. Executive Committee will sit with the faculty.  
Announcement for volunteers will be sent out by Kathleen. **We do still need student volunteers!**
- Holistic Review Presentation – Fiona Libby  
A team in the Graduate School has been working on a rubric & would like to work with some of the departments on any improvements needed. The rubric includes 1 or 0 scores on admission criteria. The spreadsheet will sum automatically to save time. Spreadsheet could be customized if there are other criteria needed. Volunteer programs should contact Fiona.

Dylan Dryer: Suggested that many graduate programs have found that using home grown evaluation instruments are effective & he would be interested in participating.

- Next Mug Club event - May 1: Service Project in cooperation with Maine Day – Mug Club (flyers handed out).
  - Enrollment numbers are looking strong for both Masters and Doctoral students for the Fall. As of the April 15 Council of Graduate Schools deadline for enrollment confirmations to Graduate School, the 2019 incoming fall class is 21% ahead of last year and 53% ahead of 2 years ago at the same point in time.
4. Review of proposed 4+1 track in Special Education (High Incidence Disabilities) New – program to review. Deborah Rooks Ellis will explain. It is a departure from our typical 4+1 in that it is a collaboration with UMM.

Accelerated program with UMM will result in dual teacher certification - with Bachelors (elementary education) & Masters (in special education) when they graduate in 5 years.

5. Review of proposal for a MS in Data Science and Engineering – Penny Rheingans & Kate Beard.
- Kate Beard – this grew out of the growing importance of data science in research. How do you present this information to multiple channels and a variety of audiences. Some of this looks at data curation, data storage, data usage, etc. Students will take courses from the core curriculum but will be able to specialize in areas that interest them.
- The proposal includes a Masters degree, Graduate Certificate and a 4+1 option. UMA & USM discussions about possible collaboration are in progress.

Vince – stated that engineering faculty were concerned because they hadn't heard about the program & the use of the word engineering in the program title is a concern.

Kate Beard stated that Shaleen Jain & Ali Abedi were involved in the creation of the program.

Laura Rickard noted this proposal was also discussed at Faculty Senate. The College of Engineering was concerned because of the use of the term.

S. Delcourt asked about the tracks in bioinformatics & business – what would be expected in terms of academic preparation in programming/computer science?

Penny Rheingans responded– typically students need a core background....if they

don't have that – they can make it up through foundational classes. It is possible for someone to enter the program from Psychology or Business. Penny mentioned that she had spoken to Michael Weber and that he was very interested in the program. Dean Weber thought data science would be an interesting add to an MBA. These would be complementary programs & not intended to be competitive. This degree could complement a variety of different disciplines.

Monique asked how the USM program would be complementary.

Penny responded that USM proposal is at the intent to plan phase. It is envisioned to be an on-campus program. We are talking with them about sharing each other's courses so students have the flexibility could go to either school.

Monique asked for additional clarity on whether the classes would be online or on campus, etc....

Shaleen Jain – COE had sent a formal response to the proposal. Has this been shared yet?

Scott said that the memo had been shared with SCIS and suggested setting up a meeting with Associate dean Mohammed Musavi to discuss concerns. It seems that the most concerning part would be the use of the words – “Data Science and Engineering”.

Penny suggested that she would be happy to meet with anyone who had concerns.

#### 6. Strategic Vision and Values (SVV): Summary of March 8 Graduate Summit discussion

See: <https://umaine.edu/strategic-visioning/graduate-education-summit/>

S. Delcourt noted that many Graduate Board Members could not attend the summit. Link above is on the Provost's website. Much of the information related to the summit including the Provost's powerpoint presentation and summit notes are on the site. Some of the results of the discussion will be incorporated into the Strategic Vision and Values efforts.

Some of the highlights of the summit – Provost posed the question – do we want to increase graduate enrollment & why? Where do we want to increase strategically and how? He noted declining population of incoming undergraduate students.

Attendees broke out into groups – first part focused on Masters programs. How could Universities look at alternative revenue streams? Masters enrollment is important. Programs need resources to grow. Return of tuition revenue might be an incentive as it is in the UMaineGOLD program.

Delcourt suggested that this is an Instructional parallel to the return of indirect cost in research projects. If we are going to change our model to focus more on professionally oriented master's program – we need to invest in the programs to help with growth.

Second part of the discussion that day – Graduate doctoral programs & growth of the research mission. If master's programs are able to generate more tuition revenue, this can help fund doctoral programs.

At the summit, Provost provided data on sources of support. Currently, there are 193 masters' degree supported students & 146 doctoral students supported on university funds. There is interest in moving the ratio more in the direction of doctoral students, especially in programs that offer both a Masters & Doctoral degrees.

S. Delcourt explained that he and Vice President Varahramyan had a recent discussion with John McCarthy, the Provost at UMass Amherst about shifting assistantship support towards doctoral students and realigning many master's programs to be more revenue-generating. UMass returns a sizable amount of the master's tuition revenue back to programs.

Shaleen Jain added that in addition to UMaineGOLD, there is also a tuition return incentive for 4+1 programs at UMaine.

While we are not similar to UMass at this moment, this structural model would make it easier for Masters to fund Doctoral Programs.

Delcourt concluded by saying that the Strategic Vision and Values process is wrapping up. As the strongest advocates for the graduate mission, it is important for this group to provide feedback. Please go the SVV the web site and provide input.

Monique LaRocque – Let's use this opportunity to advocate for what we need!

7. Items arising – There will be one final Graduate Board meeting on May 9, 2019– it will likely be short but will cover a lot of last minute items needing approval.

Meeting adjourned 4:45pm

## CURRICULUM COMMITTEE REPORT

**The Curriculum Committee met on April 30th, 2019 and recommends the following courses to the Graduate Board for approval at its May 9th, 2019 meeting.**

### *New Courses:*

FSN 545 Utilization of Aquatic Food Resources

EAD 660 The Adult Learner in PK-12 Education

EAD 661 Advanced Educational Supervision

EHD 544 Mentoring, Supervision, and Teacher Development

### *Modifications:*

FSN 502 Food Preservation

FSN 538 Food Science and Nutrition

ERS 544 Introduction to Glaciology

SED 564 Universal Design for Learning in PreK-12- Classrooms

SED 585 Communication for Students with Autism Spectrum Disorder



# **Welcome to the University of Maine**

## **Graduate Student Orientation -DRAFT**

Thursday August 29, 2019

Stodder Hall – Room 57; 3:00pm-5:15pm;

GSG Social / Peer Networking Event 5:30pm- 10:00pm

**2:00PM** –Library tour & library use tutorial

If you would like to participate; meet at the front entrance of the library just inside the doors – tour will begin at 2:00PM.

**2:30PM** – Campus Tour to meet Shelby Colburn et al in front of Fogler Library if you wish to participate

**3:00PM- 3:30 PM** - Registration at Stodder Hall – The Graduate School

(cookies and coffee will be served)

**3:30-4:00 PM – Welcome & Overview in Stodder Hall**

President Joan Ferrini – Mundy

Associate Vice President for Graduate Studies - Scott Delcourt

**4:00- 4:15PM** - Jennifer Jain – quick overview of the new online orientation module & overview of Mug Club coming events.

**4:15-4:30PM GSG Introductions & quick grants overview** (move this material to online module – along with CITL Materials)

**4:30 – 5:00PM Health and Wellness Panel** – Information about: health benefits & UMaine campus facilities including Cutler Health Center, campus recreation/wellness programs, & insurance options.

**5:00PM-5:15PM – Q & A with the Graduate School Staff**

# **Welcome to the University of Maine**

## **Teaching Assistant Orientation - DRAFT**

Wednesday, August 28, 2019; 8am-12pm

Stodder Hall – Room 57

**8:30 – 9:00AM – Registration** (coffee & refreshments will be served)

**9:00 AM – 9:15AM- Welcome & Overview**

*Jeffrey Hecker, Executive Vice President for Academic Affairs and Provost*

*Kody Varahramyan, Vice President for Research and Dean of the Graduate School*

*Scott Delcourt, Associate Vice President for Graduate Studies and Senior Associate Dean*

**9:15AM- 10:15AM – CITL Overview about educating the 21<sup>st</sup> Century Students.**

**10:15AM- 10:30 AM – Break**

**10:30AM-11:00 AM– Preparing for your first day of class – Natasha Speer**

**11:00AM – 11:30AM – Leading a Discussion & Teaching a Laboratory –** (move as much as possible into the blackboard portal)

**11:30-12:00PM – Mandatory Session – Diversity and Nondiscrimination in the Classroom** (move some components to blackboard portal)

*Elizabeth Lavoie, Deputy Title IX Coordinator*

*Sally Dobres, Interim Equal Opportunity Administrator*

*Sara Henry, Director of Student Accessibility Services*

*Kenda Scheele, Assistant Vice President and Senior Associate Dean of Students*

\*\*\*\*\*If Students are staying for an afternoon session with their departments – Grad School could possibly provide lunch tickets. (We will have to check with Depts to see if they wish to host afternoon sessions on this day.)

## **Addendum Establishing a 4+2 option for the Bachelors/Masters Degree Program in Economics**

### **RATIONALE**

**About the MS/MA Program:** The Master of Science and Master of Arts programs in Economics give students a strong foundation in quantitative knowledge and reasoning. Graduates of the program either go on to PhD programs in STEM areas or pursue careers in government, industry or the non-profit sector. The MS in Economics is a desirable qualification for many industries including insurance, health care and finance. The usual time to graduation is two years. Economics already has a 4+1 program, which serves eager high-performance undergraduate Economics majors. 4+1 students in Economics pay full tuition in all but a few exceptions.

**This addendum:** The School of Economics seeks to add a 4+2 option to our existing 4+1 program. This would allow strong 4+1 students to continue with a two-year, research-intensive degree. Some of our best local students take the 4+1 route only to realize they would like even more graduate training. This has created an advising trap in which it is unclear which option is best for advanced students. Adding a 4+2 option alleviates this advising trap, and increases tuition payment rates for 2-year masters.

**Benefit to the University:** Our master's program attracts a mix of international students and UMaine students. Currently 100% of our two year master's students are assistantship supported. Adding a 4+2 option would allow paying 4+1 students to become 2-year masters students when needed. This would increase advising flexibility, degree attainment and satisfaction, and the average rate of tuition payment for two-year Master's degrees.

**Demand from students:** Many of our 4+1 students have inquired about the possibility of such a program. We do not expect more than one or two 4+1 students to make the switch to the 4+2 program any given year.

### **THE PROCESS**

1. Students will apply by February 1 of their junior year (the year in which they have at least 60 but no more than 100 completed credit hours applicable towards graduation). The application materials shall consist of the following:
  - A transcript (unofficial is fine)
  - A statement of purpose in which either the (4+2) or (4+1) option is specified
  - A program of study prepared in consultation with an advisor from the Graduate Faculty indicating coursework that will lead to the degree within the required time-frame
  - At least two letters of recommendation to be sent directly by the Faculty members to the Graduate Coordinator
  - GRE scores (optional, but see item 6 below)

Application materials will be submitted directly to the Graduate Coordinator in the Department of Economics. The Graduate Committee will make its decision on provisional admission for each applicant by April 1 of the same year, and submit the names and programs of study of all provisionally admitted 4+ students to the Graduate School.

2. Students must maintain an undergraduate GPA of at least 3.5 from the time of application through graduation.
3. Students must be on track to completing the undergraduate core requirements by the end of the Junior year, with the exception of the Capstone in Economics which requires Senior standing.

4. Before graduation, provisionally admitted students may take up to nine credits of 500 level ECO courses towards the MA or MS degree which will count towards the Bachelor's degree (joint credits). If the undergrad student graduates with more than the required 120 credits for their undergrad degree, then up to 2 more courses can be transferred into their graduate degree (i.e., if they graduate with 123 to 126 credits then they can transfer an additional 3 to 6 credits, respectively, into the grad program). 400 level courses cannot be double counted.
5. During the senior year, students must enrol in ECO (Capstone in Economics). For 4+2 students, research for capstone will be conducted under supervision of an advisor from the Graduate Faculty, with the idea that it will lead into a Master's degree.
6. In January of the Senior year, provisionally admitted students must formally apply for admission to the graduate program through the Graduate School (including payment of the application fee). Submission of GRE scores is optional for such students, but students wishing to be considered for assistantships should be aware that they will be compared with applicants for whom GRE scores are required.
7. Upon graduation with a Bachelor's degree satisfactory performance (defined as 3.5 cumulative GPA and no grade below "B" in the courses to be double counted for the MA or MS degree), the student may be formally matriculated into the Master's program. Matriculation in the MA or MS program occur within three months after receiving their Bachelor's degree in order to use the joint credits. Under extraordinary circumstances, a student may petition to delay matriculation up to an additional 12 months at the discretion of the Graduate Committee and the Graduate School.
8. Upon matriculating into the graduate program, the existing MA or MS program requirements will apply.
9. A limited number of research and teaching assistantships will be available to matriculated graduate students. Recipients are selected on a competitive basis from the whole pool of eligible graduate students. It is the policy of the School of Economics that any 4+1 or 4+2 students pay their tuition in their first year.
10. Students may switch between the 4+1 and 4+2 options at any time with approval of the Graduate Coordinator and Advisor.
11. Any 4+2 student who does not complete the Master's Degree within 27 months of matriculation or any 4+1 student who does not complete the Master's degree within 15 months of matriculation will not be allowed to count toward their Master's degree any courses also applied to the Bachelor's degree unless the student's committee petitions the Graduate School for an extension due to extraordinary circumstances and the Graduate School grants exception.

## **4+1 BS/MS Degree Programs in Computer Science**

The School of Computing and Information Science, in conjunction with the University of Maine Graduate School, offers the opportunity for Computer Science majors to begin taking graduate courses during their senior year, double-counting up to 9 credits toward the BS and the MS. Enterprising students will then be able to get a non-thesis MS by staying one extra year during which they will complete the remaining 21 credits required by the MS.

### **Admission Process:**

#### **Provisional Admission:**

Students must be provisionally admitted into the 4+1 non-thesis MS programs during their junior year. To qualify for provisional admission, students must satisfy the following requirements:

- Students have completed at least 60 but no more than 100 credit hours applicable towards graduation.
- Students have an average GPA of 3.5 or higher.
- Students are on the track to complete the following core courses by the end of the Fall semester of the junior year:
  - COS125, COS135, COS140, COS225, COS226, COS235, COS250, COS301, COS331, and COS350, as well as the three required Math classes (MAT126, MAT127, and one of STS232, STS332, or STS434), the four required Science classes (a two-class sequence with a lab plus two others from AST, BIO, BMB, CHY, ERS, FES, SMS, PHY, or WLE), and the two required English classes (ENG101 and ENG317)

In the junior year, students must submit the following materials to

the graduate coordinator by November 15:

- 1 Undergraduate transcript (unofficial transcript is acceptable)
- 2 A plan of study that leads to graduation within 15 months after receiving the BS degree (Students must work with the graduate coordinator and their undergraduate faculty advisor to develop this study plan).

The graduate committee will make decisions on provisional admission for each applicant by January 15. All application materials and admission decision will be submitted to the Graduate School.

### **Final Admission and Matriculation:**

In the senior year, provisionally admitted students must submit the formal application to the Graduate School (including payment of the application fee) by January 15. While submission of GRE scores is optional for such students, the GRE is highly recommended if the students wish to be considered for assistantships or scholarships.

Beginning in the Spring semester of the junior year and continuing through their senior year, provisionally admitted students would take up to 9 credits toward the MS degree (required classes listed below). These courses would also count towards the BS degree (joint credits satisfying the two COS electives required of the BS), but must be part of the Master's Program of Study.

Upon graduation with a BS degree, and with satisfactory performance in courses taken as an undergraduate (defined as 3.5 cumulative GPA and no grade below "B" in the courses to be double-counted for the MS degree), the student may be formally matriculated into the MS program. Students who meet these

requirements must matriculate in their MS program within one semester/term after receiving their BS degree in order to use the joint credits.

To satisfy the MS requirement, in years 4 and 5 the student must complete the required core graduate classes, a three-credit Project (COS599), as well as three additional approved electives at the 500 level or above, up to two of which, with approval, may be from highly related areas outside Computer Science (SIE, ECE, NMD).

Students may switch from the “4+1” pathway to the Master’s Degree program with thesis, with the approval of the Computer Science graduate committee.

**Specialization  
in Conservation Science**



May 1, 2019

In order to qualify for the graduate specialization in conservation science, the students must pass six required courses, in addition to courses required by their advisor, and/or by their committee. Graduate students will also need to complete a minimum of 6 thesis credits.

**Required courses (13-14 credits)**

1. EES 598 Communication and Facilitation for Effective and Inclusive Conservation Efforts (2cr) or communication substitution (Appendix A)
2. EES 590 Special Topics in EES—Resilience Theory and Practice (2cr)
3. EES 598 Special Seminar in EES—Transdisciplinary Research Seminar 1 (2cr)
4. EES 598 Special Seminar in EES—Transdisciplinary Research Seminar 2 (2cr)
5. CMJ 695 Internship (2cr)
6. One analytic elective (Appendix A)

Committee membership must be drawn from at least two units (home departments). Other requirements for the graduate specialization in conservation science will be determined on a case-by-case basis by the Graduate Advisory Committee of the graduate student and will be outlined in the student's Program of Study. These may include specific courses, research topic, or advisory committee composition requirements.



Appendix A: Specialization in conservation science list of communication and analytic electives

**1. Communication Substitution**

Course Number	Title
CMJ 580	Environmental Communication
CMJ 608	Communication Theory
CMJ 610	Seminar in Risk Communication

**2. Analytic Electives**

Course Number	Title
BIO 593	Advanced Biometry
ECO 530	Econometrics
ECO 530	Advanced Econometrics
ERS 592	Climate Analysis
PSY 540	Advanced Psychological Statistics and Methods I
PSY 541	Advanced Psychological Statistics and Methods II
PSY 630	Current Topics in Social Psychology (Applied Statistics)
SFR 503	Advanced Forest Measurements and Models
SFR 528	Qualitative Data Analysis in Natural Resources
SFR 575	Advanced Forest Biometrics and Modeling
SFR 605	Ecosystem Science
SIE 512	Spatial Analysis
STS 437	Statistical Methods in Research
STS 531	Mathematical Statistics I
STS 532	Mathematical Statistics II



## **Master of Business Administration (MBA) and Doctor of Pharmacy (Pharm D) Dual Degree**

The complementary knowledge and skills afforded by a dual degree in graduate business (an MBA) and pharmacy (PharmD) enable the recipient to more effectively compete and succeed in areas including, but not limited to, healthcare management, leadership, financial communication, process improvement, technology, monetized research, internal career advancement and business development.

The marketplace for graduate students is demanding students with both business skills and technical skills. From *Bloomberg Businessweek*, July 11, 2014.

The College of Pharmacy, University of New England (UNECOP) and the University of Maine Graduate School of Business (UM-GSB) have collaborated on a Dual Degree MBA – Pharm D program to further students' abilities to acquire these relevant skills.

1. The Doctor of Pharmacy. 146 credit hours total.

The Doctor of Pharmacy degree is a 146 credit graduate degree consisting of 140 required credits and 6 credits of electives. The program is only offered in a live format.

2. The MBA is a 30 credit graduate degree consisting of 24 required credits and six credits of electives. The MBA can be taken live or via distance technology.
3. Dual MBA – Pharm D 164 credit hours total.

*The dual degree represents a reduction in total credits versus obtaining the two degrees separately. The dual degree can be pursued via a combination of live and distance technology.*

The dual degree program consists of 164 credit hours, a reduction from the 176 credits the two degrees would require if taken separately. The student's program of study would consist of the core classes in each program plus electives as explained below. It leads to two graduate degrees: an MBA and a Pharm D.

Students are required to complete the requirements for a degree in each program. Six hours of Pharm D courses can be counted as MBA electives and six hours of MBA credits can be counted towards the Pharm D (i.e., a total of 12 credits can be double counted). As a result, a total of only 164 credit hours are required to complete both degrees (rather than the 176 usually required for two, completely independent graduate degrees).

The Pharm D program requires 3 years of didactic coursework. The fourth year of the program consists of six 6-credit advanced pharmacy experience education (APPE) courses which are unpaid internships within various pharmacy settings. During the summer after the first year, students are enrolled in their community introductory pharmacy practice experience (IPPE) for 6 weeks. In the summer after their second year, students are enrolled in a 4 week institutional IPPE.

The MBA program does have foundation or prerequisite requirements that can be met before matriculating or while a graduate student. The prerequisites need to be completed prior to course(s) requiring them. This foundation consists of courses in accounting, economics, and statistics. Some applicants will already meet some or all of these requirements. For those who do not, the University of Maine offers accelerated online courses in accounting (BUA 400) and economics (ECO 410) for students without prior courses in these areas. The business school requires a statistics course, but will accept the statistics course taken as a pre-requisite for admission to pharmacy school. Once matriculated, the Business School offers non-credit tutorials in finance, marketing, and management for those who need this background knowledge.

### **Admission and Advising**

Students will apply separately for each degree, meeting the full entrance requirements of each. Pharmacy students will apply to the business school during the spring of their first academic semester if they already possess a BS degree or during the spring of their second academic year if they did not already possess a BS degree prior to entry into pharmacy school. The director of the business program will review applications to the business school. Once a year in July, the Graduate Program Director of UM-GSB and the Associate Dean for Academic Affairs of UNECOP will meet to monitor degree progress of students enrolled in the dual degree program. The units agree to require only one standardized admissions test. Candidates who begin their MBA program after their Pharm D has been conferred will receive a GMAT waiver. For students who begin the MBA program during the pharmacy program, completion of the GMAT (or GRE) exam is required.

Because the student will receive two degrees, a program of study for each degree must be developed and approved by the respective graduate coordinator or unit committee. Thus students in the dual-degree program will have two advisors, one from UNECOP and one from UM-GSB.

### **Failure to complete one program**

Should a student withdraw from the pharmacy program and already possess a BS degree, she/he can complete the MBA according to the full requirements of that degree program. Should a student withdraw from the pharmacy program and not already possess a BS degree, they will also have to withdraw from the MBA program. A student can withdraw from the MBA program and continue their pharmacy studies.

## Programs of study

Each student's program of study will be designed to meet the requirements of both degrees in which they are enrolled. The dual degree program gives the student, and his or her advisor or advisory committee, the latitude to begin or end with the complete MBA program. Sample programs of study are listed here for illustration. For a student enrolled in the dual degree program MBA and Pharm D, required courses are:

<b>Pharm D (140 credits total)</b>	<b>MBA (24 credits total)</b>
PHAR 101, 102, 201, 202, 301, 302 Integrated Group Learning I-VI course sequence; (12 cr total)	BUA 601 Statistical Analysis & Modeling for Organizational Operations (3 cr)
PHAR 103, 104, 203, 204, 303, 304 Abilities Lab I-IV course sequence; (12 cr total)	BUA 605 Creating & Capturing Value in the Digital Economy (3 cr)
PHAR 119 Intro to Pharmacy (1 cr)	BUA 609 Financial Statement Analysis (3 cr)
PHAR 111 Foundations of Medicinal Chemistry (1 cr)	BUA 620 Law, Business and Society (3 cr)
PHAR 113 Foundations of Pharmacology (2 cr)	BUA 626 Management of Contemporary Organizations (3 cr)
PHAR 117 Foundations of Drug Information (1 cr)	BUA 649 Management Policy (3 cr)
PHAR 115 Foundations of Pharmacy Calculations (1 cr)	BUA 651 Financial Management (3 cr)
PHAR 121 Biochemistry (3 cr)	BUA 670 Managerial Marketing (3 cr)
PHAR 123 Pharmaceuticals (3 cr)	
PHAR 112 Foundations of Pharmacogenomics (2 cr)	
PHAR 120 Medical Immunology (3 cr)	
PHAR 122 Pharmacokinetics	
PHAR 124 Evidence Based Medicine and Biostatistics (4 cr)	
PHAR 140 Community IPPE (4 cr)	
PHAR 205, 206, 207, 208, 209, 210, 305, 306, 307, 308, 309, 310; Drugs and Disease I-XII course sequence (34 cr total)	
PHAR 231 Healthcare Systems and Quality (3 cr)	
PHAR 230 Social Behavior, Outcomes, and Population Health (3cr)	
PHAR 240 Summer Institutional IPPE (3 cr)	
PHAR 331 Pharmacy Management and Leadership (3 cr)	
PHAR 342 Interprofessional Experience (3 cr)	
PHAR 330 Pharmacy Law and Ethics	
<i>Two 3-credit BUA required courses will count toward Pharm D degree electives replacing 3 (2 credit) elective courses</i>	<i>Two Pharm D required courses (6 credits) will count toward the MBA degree</i>



The MBA program has rolling admissions. Students can begin the MBA program in any semester. Generally, there is no prescribed sequence of courses, except:

- i. The program's capstone course (BUA 649) should be taken near the end of the program.
- ii. Course prerequisites must be completed prior to taking a course.

Students must begin the Pharm D program in the Fall.

(Signers)



## **Master of Business Administration (MBA) and Doctor of Pharmacy (Pharm D) Dual Degree**

The complementary knowledge and skills afforded by a dual degree in graduate business (an MBA) and pharmacy (PharmD) enable the recipient to more effectively compete and succeed in areas including, but not limited to, healthcare management, leadership, financial communication, process improvement, technology, monetized research, internal career advancement and business development.

The marketplace for graduate students is demanding students with both business skills and technical skills. From *Bloomberg Businessweek*, July 11, 2014.

The College of Pharmacy, University of New England (UNECOP) and the University of Maine Graduate School of Business (UM-GSB) have collaborated on a Dual Degree MBA – Pharm D program to further students' abilities to acquire these relevant skills.

1. The Doctor of Pharmacy. 146 credit hours total.

The Doctor of Pharmacy degree is a 146 credit graduate degree consisting of 140 required credits and 6 credits of electives. The program is only offered in a live format.

2. The MBA is a 30 credit graduate degree consisting of 24 required credits and six credits of electives. The MBA can be taken live or via distance technology.
3. Dual MBA – Pharm D 164 credit hours total.

*The dual degree represents a reduction in total credits versus obtaining the two degrees separately. The dual degree can be pursued via a combination of live and distance technology.*

The dual degree program consists of 164 credit hours, a reduction from the 176 credits the two degrees would require if taken separately. The student's program of study would consist of the core classes in each program plus electives as explained below. It leads to two graduate degrees: an MBA and a Pharm D.

Students are required to complete the requirements for a degree in each program. Six hours of Pharm D courses can be counted as MBA electives and six hours of MBA credits can be counted towards the Pharm D (i.e., a total of 12 credits can be double counted). As a result, a total of only 164 credit hours are required to complete both degrees (rather than the 176 usually required for two, completely independent graduate degrees).

The Pharm D program requires 3 years of didactic coursework. The fourth year of the program consists of six 6-credit advanced pharmacy experience education (APPE) courses which are unpaid internships within various pharmacy settings. During the summer after the first year, students are enrolled in their community introductory pharmacy practice experience (IPPE) for 6 weeks. In the summer after their second year, students are enrolled in a 4 week institutional IPPE.

The MBA program does have foundation or prerequisite requirements that can be met before matriculating or while a graduate student. The prerequisites need to be completed prior to course(s) requiring them. This foundation consists of courses in accounting, economics, and statistics. Some applicants will already meet some or all of these requirements. For those who do not, the University of Maine offers accelerated online courses in accounting (BUA 400) and economics (ECO 410) for students without prior courses in these areas. The business school requires a statistics course, but will accept the statistics course taken as a pre-requisite for admission to pharmacy school. Once matriculated, the Business School offers non-credit tutorials in finance, marketing, and management for those who need this background knowledge.

### **Admission and Advising**

Students will apply separately for each degree, meeting the full entrance requirements of each. Pharmacy students will apply to the business school during the spring of their first academic semester if they already possess a BS degree or during the spring of their second academic year if they did not already possess a BS degree prior to entry into pharmacy school. The director of the business program will review applications to the business school. Once a year in July, the Graduate Program Director of UM-GSB and the Associate Dean for Academic Affairs of UNECOP will meet to monitor degree progress of students enrolled in the dual degree program. The units agree to require only one standardized admissions test. Candidates who begin their MBA program after their Pharm D has been conferred will receive a GMAT waiver. For students who begin the MBA program during the pharmacy program, completion of the GMAT (or GRE) exam is required.

Because the student will receive two degrees, a program of study for each degree must be developed and approved by the respective graduate coordinator or unit committee. Thus students in the dual-degree program will have two advisors, one from UNECOP and one from UM-GSB.

### **Failure to complete one program**

Should a student withdraw from the pharmacy program and already possess a BS degree, she/he can complete the MBA according to the full requirements of that degree program. Should a student withdraw from the pharmacy program and not already possess a BS degree, they will also have to withdraw from the MBA program. A student can withdraw from the MBA program and continue their pharmacy studies.



## Programs of study

Each student's program of study will be designed to meet the requirements of both degrees in which they are enrolled. The dual degree program gives the student, and his or her advisor or advisory committee, the latitude to begin or end with the complete MBA program. Sample programs of study are listed here for illustration. For a student enrolled in the dual degree program MBA and Pharm D, required courses are:

<b>Pharm D (140 credits total)</b>	<b>MBA (24 credits total)</b>
PHAR 101, 102, 201, 202, 301, 302 Integrated Group Learning I-VI course sequence; (12 cr total)	BUA 601 Statistical Analysis & Modeling for Organizational Operations (3 cr)
PHAR 103, 104, 203, 204, 303, 304 Abilities Lab I-IV course sequence; (12 cr total)	BUA 605 Creating & Capturing Value in the Digital Economy (3 cr)
PHAR 119 Intro to Pharmacy (1 cr)	BUA 609 Financial Statement Analysis (3 cr)
PHAR 111 Foundations of Medicinal Chemistry (1 cr)	BUA 620 Law, Business and Society (3 cr)
PHAR 113 Foundations of Pharmacology (2 cr)	BUA 626 Management of Contemporary Organizations (3 cr)
PHAR 117 Foundations of Drug Information (1 cr)	BUA 649 Management Policy (3 cr)
PHAR 115 Foundations of Pharmacy Calculations (1 cr)	BUA 651 Financial Management (3 cr)
PHAR 121 Biochemistry (3 cr)	BUA 670 Managerial Marketing (3 cr)
PHAR 123 Pharmaceutics (3 cr)	
PHAR 112 Foundations of Pharmacogenomics (2 cr)	
PHAR 120 Medical Immunology (3 cr)	
PHAR 122 Pharmacokinetics	
PHAR 124 Evidence Based Medicine and Biostatistics (4 cr)	
PHAR 140 Community IPPE (4 cr)	
PHAR 205, 206, 207, 208, 209, 210, 305, 306, 307, 308, 309, 310; Drugs and Disease I-XII course sequence (34 cr total)	
PHAR 231 Healthcare Systems and Quality (3 cr)	
PHAR 230 Social Behavior, Outcomes, and Population Health (3cr)	
PHAR 240 Summer Institutional IPPE (3 cr)	
PHAR 331 Pharmacy Management and Leadership (3 cr)	
PHAR 342 Interprofessional Experience (3 cr)	
PHAR 330 Pharmacy Law and Ethics	
<i>Two 3-credit BUA required courses will count toward Pharm D degree electives replacing 3 (2 credit) elective courses</i>	<i>Two Pharm D required courses (6 credits) will count toward the MBA degree</i>





The MBA program has rolling admissions. Students can begin the MBA program in any semester. Generally, there is no prescribed sequence of courses, except:

- i. The program's capstone course (BUA 649) should be taken near the end of the program.
- ii. Course prerequisites must be completed prior to taking a course.

Students must begin the Pharm D program in the Fall.

(Signers)



**The University of Maine – Graduate School of Business  
&  
American University in Bulgaria  
4+1 Agreement**

**Program Description:**

This program provides Business Administration majors at the American University in Bulgaria the opportunity to complete the University of Maine MBA program in one academic year, after receiving a bachelor's degree from the American University in Bulgaria (AUBG). The AUBG students can choose from the Online MBA or the Evening MBA (in-residence), with the admission criteria being the same for either program. This 4+1 agreement provides for a favorable admission process and an accelerated degree plan.

**Admission Requirements:**

1. Undergraduate GPA of 3.25
2. Earned a "B" or better in the following AUB business courses:
  - a. BUS 101 Management in a Global Environment
  - b. BUS 201 Management Information Systems
  - c. BUS 220 Financial Accounting
  - d. BUS 221 Managerial Accounting
  - e. BUS 260 Marketing
  - f. BUS 300 Business Ethics (WIC)
  - g. BUS 330 Corporate Finance I
  - h. BUS 340 Organizational Theory and Behavior
  - i. BUS 448 Strategic Management
3. Earned a "B" or better in a statistics course.
4. Earned a "C" or better in Micro and Macro Economics.
5. A GMAT waiver is available, if the above criteria are met.
6. The TOEFEL is waived.
7. Completed application.

AUBG students can apply for the program in the Fall of their senior year and receive conditional admission to the MBA program. Full admission will be granted upon successful completion of their AUBG degree in Business Administration. If an applicant needs statistics and/or micro/macro economics, they can take those courses online in the spring of their senior year or as part of the first term (summer) of the MBA program.

**Degree Plan:**

AUBG students will have the option to complete the Essential MBA (30 credit hours) or an MBA with a concentration (33 – 36 credit hours) in either the Online or the Evening MBA format.

*MBA Core (24 credit hours):*

- BUA 601 – Statistical Analysis and Modeling for Organizational Operations
- BUA 605 – Creating & Capturing Value in the Digital Economy
- BUA 609 – Financial Statement Analysis
- BUA 620 – Law, Business and Society
- BUA 626 – Management of Contemporary Organizations
- BUA 645 – Special Topics (Managerial Marketing)
- BUA 649 – Management Policy
- BUA 651 – Financial Management

*Electives (6 - 12 credit hours):*

- 6 credit hours for the Essential MBA, via MBA Elective Courses
- 9 to 12 credit hours, via Graduate Electives as prescribed by the concentration requirements

**Degree Schedule:**

<b>Term</b>	<b>Courses</b>	<b>Credit Hours</b>	<b>Format</b>
Summer*	2 MBA Core Courses	6 Credit Hours	Online
Fall	4 MBA Core Courses	12 Credit Hours	Online or Evening (In-residence)
Spring	BUA 649, 1 Core, 2 electives	12 Credit Hours	Online or Evening (In-residence)
Summer**	2 Electives	6 Credit Hour	Online

\* If necessary, foundation courses in statistics and economics can also be taken.

\*\* As necessary to complete Concentration requirements.

This schedule illustrates an accelerated schedule for completing the MBA in less than a year, but AUB students can also choose to complete the MBA degree at their own pace.