Present: John Buncher, Josef Dorfmeister, Friedrich Littmann (UCC representative), Leah Irish, Megan Orr, Svetlana Kilina, Ben Laabs, Lisa Montplaisir (chair), Andriy Voronov and Gursimran Walia

Announcements:

Lisa Montplaisir called the meeting to order.

Chair Election

Lisa Montplaisir asked for a volunteer to chair the committee. There being none, she agreed to be the chair of the committee.

Computer Science Proposals from the 2017-2018 Academic Year

The Computer Science Department should decide whether to purge the course proposal changes in CourseLeaf from the last academic year. Rhonda Kitch can assist with this process.

Deadline for Curriculum Changes

All curriculum changes must be submitted by March 2019 to allow for time to make it through the committee levels.

General Education Committee Policies Update

Friedrich Littman gave an update on the Genera Education Committee policies. The UCC handles all Gen Ed course revalidation. There will be a five-year revalidation cycle. Departments will be informed during summer which courses should be submitted for revalidation the following fall semester. Lisa Montplaisir suggested the committee select a different time to notify departments because the majority of faculty are not available in the summer.

Current Plan:

Fall 2018: Category A classes (none from the CSM)

Fall 2019: GEOG 151
PSYC 111, 112, 214, 250
CSCI 122
MATH 147, 166
STAT 330
Fall 2020: Most courses of Category S

Courses may be submitted early for revalidation. New courses are welcome, particularly for D, G, S categories.

Revalidation proposal syllabus requirements: Category, outcomes, activities/evaluation methods that will be used to determine if the outcomes are met. Courses need to meet 100% outcomes.

Class Attendance Policy


General Education Administrative Policy

Lisa Montplaisir stated a student contacted the Office of Registration and Records making them aware of an email sent to students who are registered for BIOL 150/150L indicating this course is not general education. The Department of Biological Sciences purposely dropped these courses from Gen Ed several years ago.

Ranelle Ingalls stated that while technically this is true and the course and lab are not outwardly approved for GE Science and Technology the general education administrative policy (#5) allows for this course to satisfy this category.

Administrative policy #5 reads: “General education requirements can be met by successful completion of a course for which an approved general education course in the same department is a prerequisite or by successful completion of an advanced course in the same department with comparable course content.”

Discussion occurred on this policy.

Respectfully submitted,

Diane Goede
Recording Secretary
Present: John Buncher, Josef Dorfmeister, Friedrich Littman (UCC representative), Leah Irish, Megan Orr, Ben Laabs, Lisa Montplaisir (chair), and Andriy Voronov

Absent: Svetlana Kilina and Gursimran Walia

Friedrich Littmann asked for the CCC’s input on additional bullet points that detail critical application of the “Science and Technology Category”.

The Office of Registration and Records questioned why within the general course list some of the categories include additional bullet points that detail critical application of the category, yet these items are not listed in policy. Lisa Montplaisir stated she believed these bullet points have been policy for years. Please see below.

SCIENCE & TECHNOLOGY CATEGORY:
- At least four credits must be in natural or physical sciences.
- A one-credit lab must be taken as a co-requisite with a general education science/technology course unless the course includes an embedded lab experience equivalent to a one-credit course.

Josef Dorfmeister moved to keep the first bullet as a requirement. John Buncher seconded the motion. All approved and the motion carried.

Josef Dorfmeister moved to keep the second bullet as a requirement. Ben Laabs seconded the motion. All approved and the motion carried.

It was suggested the UCC should define the technology category.

Two Chemistry and Biochemistry graduate level curricular changes were on the agenda. Since the department representative was not present these changes were not discussed. College policy states the department representative must be present at the meeting. Questions revolving these courses are how these fit in with the revised curriculum of the four broad courses. Are these curricular changes some of those courses and if so how do they fit in the Chemistry and Biochemistry Department revised curriculum if only the title changes but none of the content?

Lisa Montplaisir will reach out to the department representative and chair to advise them to contact the Graduate School to inquire whether all the information in the CourseLeaf template should be completed before it can be moved on to the next level.

Respectfully submitted,

Diane Goede
Recording Secretary
Curriculum Committee
Meeting Minutes
October 5, 2018

Present: John Buncher, Josef Dorfmeister, Leah Irish, Svetlana Kilina, Megan Orr, Ben Laabs, Lisa Montplaisir (chair) and Gursimran Walia

Absent: Andriy Voronov

1. CHEM 759: Advanced Survey of Physical Chemistry – title change. This change is requested to bring the Chemistry and Biochemistry Department's core graduate-level courses in chemistry in better alignment with the recently approved Outcome-based Ph.D. Program in Chemistry. Course content and syllabus are unchanged. Svetlana Kilina moved to approve the name change. Ben Laabs seconded the motion. All approved and the motion carried.

2. CHEM 732: Advanced Survey of Analytical Chemistry – name change. The Department requests to change the title of CHEM 732 to "Advanced Survey of Analytical Chemistry" in order to be consistent with our new graduate curriculum. Svetlana Kilina moved to approve the name change. Josef Dorfmeister seconded the motion. All approved and the motion carried pending minor additions in the impact section.

3. BIOL-PHD: Ph.D. Biological Sciences (new title) – title change. The departments of Zoology and Botany were merged several years ago into one department of Biological Sciences. The Department has spent several years consolidating courses under the course headings for undergraduate and master's degrees in biology. The department would like to change the Zoology PhD program title to Biological Sciences PhD program. The change in the program name will update the PhD program to better reflect the diverse types of research that can be conducted for doctoral studies in the department. This is the last step in consolidating the degree programs to match the focus of the department. Faculty and current PhD students in the department are supportive of this change. Lisa Montplaisir moved to approve the title change. Josef Dorfmeister seconded the motion. All approved and the motion carried.

4. BOT-Ph.D.: Ph.D. Botany – program deactivation proposal. The departments of Zoology and Botany were merged several years ago into one department of Biological Sciences. The Department has spent several years consolidating courses under the course headings for undergraduate and master's degrees in biology. This is the last step needed. Lisa Montplaisir moved to deactivate the program. Josef Dorfmeister seconded the motion. All approve and the motion carried.
Discussion occurred on the new program proposed by the College of Health Professions, Bachelor of Science in Health Sciences. This program is similar to the Biological Sciences health science option. There was discussion on how this program will impact the College. Lisa Montplaisir suggested this should be pulled from the Faculty Senate consent agenda so further discussions can take place between Colleges and departments.

The meeting was adjourned at 12:25 p.m.

Recording secretary,

Diane Goede
Present: John Buncher, Josef Dorfmeister, Leah Irish, Svetlana Kilina, Friedrich Littmann (UCC representative) Megan Orr, Ben Laabs, Lisa Montplaisir (chair), Andriy Voronov and Gursimran Walia

1. **STAT 461/661: Applied Regression Models - prerequisite change and bulletin change.** STAT 461 uses both matrix algebra and differential calculus. The additional pre-requisites reflect this. The absence of these pre-requisites has generally not been an issue in the past because MATH 129 and MATH 165 are requirements for undergraduate STAT and MATH/STAT majors, but students in other undergraduate programs struggle with this course if they've only had STAT 330. Identify graduate student objectives and make minor change on the syllabus regarding the bulletin change. These courses will be rolled back for the minor changes on the syllabus. Megan Orr moved to approve these changes. Josef Dorfmeister seconded the motion. All approved and the motion carried pending the minor changes.

2. **STAT 476/Math 476: Actuary Exam Study – cross-list courses.** Currently there is significant overlap between material from MATH 376 and STAT 476. By cross-listing these courses the Math Department will be able to share responsibility, while also cutting requirements for students in the already dense MATH/STAT pre-actuarial program. Josef Dorfmeister moved to approve. Megan Orr seconded the motion. All approved and the motion carried.

3. **MATH 460/660: Mathematical Software – name change and bulletin description.** Allowing other software packages to be discussed will allow other faculty to teach the course, and also for students to be exposed to multiple options. Josef Dorfmeister moved to approve. Megan Orr seconded the motion. All approved and the motion carried with edits to the syllabus per template requirements. This was roll backed to department for necessary changes to the syllabus.

4. **MATH 630: Graph Theory – reactivate course.** This course was erroneously deactivated last year. Josef Dorfmeister moved to approve. John Buncher seconded the motion. All approved and the motion carried with edits to the syllabus per template requirements. This was roll backed to department for necessary changes to the syllabus.

5. **MATH 839 – Topics in Combinatorics and Discrete Mathematics – new course.** This course fills a gap in our graduate program where students are not exposed to higher level combinatorics/discrete math even though we have significant student interest in the area. Josef Dorfmeister moved to approve. Megan Orr seconded the motion. All approved and the motion carried.
Announcements:

The Bachelor of Science in Health Sciences, proposed by the College of Health Professions, has been pulled from the Faculty Senate agenda for further discussions with concerned departments.

The meeting was adjourned at 12:35 p.m.

Respectfully submitted,

Diane Goede
Present: John Buncher, Josef Dorfmeister, Leah Irish, Svetlana Kilina, Friedrich Littmann (UCC Representative), Megan Orr, Ben Laabs, Lisa Montplaisir (chair), Andriy Voronov, and Gursimran Walia

1. **STAT 461/661: Applied Regression Models - prerequisite change and bulletin change.** All the requested changes were made. This was moved forward to the Dean’s level for approval.

2. **CSCI 313: Advanced Software Development for Games – title change – Advanced Software Development.** The changes in title, catalog description, and course syllabus make this course more suitable for the existing B.S. in Computer Science and for a new B.S. in Software Engineering that may be proposed in the next year. Gursimran Walia moved to approve these changes. John Buncher seconded the motion. All approved and the motion carried.

3. **CSCI 641: Introduction to Computer Science Education – new course.** The Graduate Certificate in Computer Science Education was recently approved by the SBHE. This is the first course in a sequence required for the Graduate Certificate in Computer Science Education. Gursimran Walia moved to approve these changes. John Buncher seconded the motion. All approved and the motion carried.

4. **Bachelor of Science in Health Sciences update:** Deans Wood and Peterson will be meeting on November 27th to discuss the proposed changes from the meeting between faculty in both Colleges. Please see the changes discussed below.

   1. Change the name of the degree to “Bachelor of Science in Health Services”
   2. Create a minor using the coursework offered through the College of Health Professions, which would be open to all majors on campus.
   3. Open up CHP 125 to students outside of the College of Health Professions (CHP), and possibly the same for other 100-200 level courses including CHP 184 and PHRM 170.
   4. The 15 credits of undergraduate research, internship of clinical experience courses should be developed further, and in conjunction with College of Science and Mathematics programs that already offer such courses (and to allow them to count towards this requirement). To ensure some continuity in student learning, as well as integration of academic and experiential content, some of these 15 credits should be below the 300 level. Dr. Friesner took the liberty of proposing that at least 6 of these 15 credits (i.e., at least one course per semester or its equivalent) should be 300 level of lower in the stage II proposal.
5. Any academic oversight (whether an advisory board, curriculum committee, etc.) will include representation from the College of Science and Mathematics (CSM). This will be an essential check/balance to ensure that the BSHS degree does not over-tax courses offered through the CSM, and that a mechanism exists to resolve those issues when they occur.

6. The CHP and CSM will coordinate recruiting efforts for the BSHS degree, and will work collaboratively (in conjunction with the Office of Admissions) to address challenges associated with recruiting for the new proposed degree.

There were also several longer term challenges and opportunities that were discussed, noting that these issues cannot be feasibly addressed in one meeting.

1. The BSHS degree may lead to a redistribution of existing students across colleges and programs on campus. The number is generally in the range of 50-100 students per year. This situation requires monitoring and collaboration between upper level administrators to address it over time.

2. There are some opportunities for programs on campus to collaborate to start new programs in the health professions, that leverage the resources and strengths of multiple programs and college. Examples include graduate degrees in occupational and physical therapy, and possibly the development of physician assistant programs. While some programs of this nature do exist in the state, the quantity demanded for graduate outpaces quantity supplied, and thus there should be little competition between these institutions.

Respectfully submitted,

Diane Goede
Recording Secretary
Present: John Buncher, Josef Dorfmeister, Leah Irish, Svetlana Kilina, Friedrich Littmann (UCC Representative), Megan Orr, Lisa Montplaisir (chair), Andriy Voronov, and Gursimran Walia

Absent: Ben Laabs

1. **CSCI 413: Principles of Software Engineering – prerequisite change.** The prerequisite for the course is being updated to reflect changes to the Computer Science Department curriculum. CSCI 313 was recently changed to a more general software engineering course, and it is a more appropriate prerequisite for this course. Gursimran Walia moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried pending minor changes to the syllabus.

2. **CSCI 420/720: Empirical Methods in Software Engineering – new course/renumbering.** The Computer Science Department is adding 400-level versions of several 700-level software engineering courses to provide additional elective options for undergraduate students. The 400-level course serves as an elective for the B.S. and B.A. degrees in computer science. It also serves as an elective for the computer science minor. The 400-level course was rolled back to the department because it is not approved to be combined with a 700 level course. This can be redone as a 300-level or change the 700 to 600. The 700-level course was rolled back to update the syllabus to be only graduate level since the undergraduate course was not approved. Gursimran Walia moved to approve the 700-level course. Josef Dorfmeister seconded the motion. All approved and the motion carried pending changes to the syllabus.

3. **CSCI 642: Introduction to Computer Science Problem Solving – new course.** This is the second course in a sequence required for the Graduate Certificate in Computer Science Education. The Graduate Certificate in Computer Science Education was recently approved by the SBHE. This is the second course required for the program. Gursimran Walia moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

4. **PSYC 763: Grant Writing for Psychological Scientists – new course.** The Psychology Department is in the process of revising the program requirements to better meet the needs of Ph.D. Psychology graduates. There has been a reduction in the number of special topics graduate courses that are required and the addition of this course will broadly benefit the graduate students through formalized instruction in grant writing and review. In the past, students received inconsistent instruction in these topics because it was entirely dependent upon
the students’ advisors to discuss grant writing with them. This course provides instruction to all students in the program. Leah Irish moved to approve. John Buncher seconded the motion. All approved and the motion carried.

5. **PSYC – Ph.D.: Psychology – new program.** The Psychology Department is revising the program requirements to streamline student course requirements, maximize faculty teaching resources/effort, increase flexibility of scheduling courses, and adapt to fluctuations in enrollment while still meeting minimum enrollment requirements. The Department will eliminate specialty tracks (i.e., Health/Social and Visual and Cognitive Neuroscience) and instead require all students within the Ph.D. in Psychology degree program to complete the same core set of course requirements. One didactic course has been added in grant writing and review (PSYC 763) which will provide students with valuable skills relevant for a broad range of careers in psychology. One non-didactic grant writing experience course has been added (PSYC 893) which will credit the students’ effort during the semester in which they prepare and submit their own grant/fellowship. The actual submission process is important above and beyond the classroom activity of mock grant proposals because it exposes students to the variable and often complex requirements of funding agencies and will provide students with actual reviewer feedback on their proposals. Leah Irish moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

6. **STAT 661: Applied Regression Models – bulletin description.** This was rolled back by the Graduate School to include more information regarding the term project required for the graduate students. These changes have been made. This was rolled back to the Statistics Department by the College Curriculum Committee to clarify the grading ground rules. Since this was previously approved by the College Curriculum Committee it will be advanced when return to this level.

7. **STAT 471/671: Introduction to R Language – prerequisite change.** Students in STAT 471 should have knowledge of basic inferential statistical methods. Both STAT 330 (applied) and STAT 368 (theoretical) are introductory classes that cover these methods, so these are being added as prerequisites for STAT 471. Students in STAT 671 should have knowledge of basic inferential statistical methods. The instructor of the course would also like the graduate students in the course to have knowledge of matrix algebra because matrix operations are also often used throughout the course. The expectation of this knowledge has been added to the bulletin description. This was rolled back to the Statistics Department to add policies to the syllabus. Megan Orr moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried pending minor changes to the syllabus.
8. **STAT 711: Basic Computational Statistics Using R and 714: Statistical Machine Learning – new courses.** The Department of Statistics is in the process of developing an online graduate certificate in applied large data analysis to be offered during the summer semester. This certificate will be designed to attract new students to NDSU. Specifically, this certificate is intended for working professionals looking to expand their knowledge of big data analysis. STAT 711 and 714 will be one of the courses required for the certificate. These courses are two of four courses which will be proposed for the graduate certificate in applied large data analysis. Therefore, this program will have different objectives than the current programs in Statistics. The courses for this program will be offered in the summer semester only. These courses were rolled back to the Department. Please clarify under "other restrictions" that these courses are for the certificate only for statistics and cannot be taken for credit if other statistics courses of similar content have been taken (insert specific numbers).

9. **STAT 860: Statistical Learning and Data Mining – new course.** With the increasing size and complexity of many data sets, statistical methods for learning from and analyzing these data sets have been developed. This course will cover many of these methods. This course was rolled back to the Statistics Department for consideration of title and purpose of course since it seems to replicate other existing courses.

10. **Bachelor of Science in Health Sciences Update:** Deans Wood and Peterson met to discuss the issues/concerns with the BS in Health Sciences new program. A Memo of Understanding has been written addressing these concerns and feedback has been requested from faculty.

**Announcements:**

College Curriculum Committee meetings will be held on Fridays at noon during spring semester.

Respectfully submitted,

Diane Goede
Recording Secretary
Present: John Buncher, Josef Dorfmeister, Leah Irish, Svetlana Kilina, Ben Laabs, Friedrich Littmann (UCC Representative), Megan Orr, Lisa Montplaisir (chair), Jeremy Straub (alternate for Computer Science) and Andriy Voronov

Absent: Gursimran Walia

1. **CSCI 372: Comparative Programming Languages: prerequisite change.** By changing the prerequisite for CSCI372 class from CSCI213 to CSCI161, it will provide the opportunity for the students to graduate a year ahead of where they otherwise would. Both CSCI 213 and CSCI 372 are the largest blocks in terms of other courses that require them. Note that, the knowledge provided in CSCI161 is sufficient to prepare students for CSCI372. Jeremy Straub moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

2. **CSCI 641: Introduction to Computer Science Education – new course.** This course was rolled back to the department by the Graduate School asking to include course meeting hours and elaborate each of the criteria for the final portfolio. This course was moved on to the next level since it was previously approved by the College Curriculum Committee.

3. **CPM-MIN: Minor Coatings & Polymeric Materials minor changes.** CHEM 240 is a sufficient prerequisite for our CPM 473 and CPM 474 courses and will streamline the program for non-chemistry majors who take the minor. CPM 474 and CPM 475 are the core courses for the minor and should be required of all students. A new course, CPM 436 Biopolymers and Biocomposites, was added to the list of courses available for the minor. The changes are needed to make it possible for students in the minor to get credit for CHEM 240 and CPM 436. Since students in the minor have a variety of courses to choose from to earn the 16 credits, we need to ensure that students are taking the core courses for the minor. Andriy Voronov moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

4. **STAT 471/671: Introduction to the R Language.** These courses were approved at the December 7th meeting pending requested changes. The changes were made and these courses have been advanced to the next level.

5. **STAT 661: Applied Regression Models.** This course was approved at the December 7th meeting pending requested changes. The changes were made and this course has been advanced to the next level.
6. **STAT 860: Statistical Machine Learning – new course.** This course was rolled back to the department to reconsider the title and purpose of course. The department changed the course title. Megan Orr moved to approve. John Buncher seconded the motion. All approved and the motion carried.

**Announcements:**

**Deadlines**

All new and existing course and program proposals must be initiated in CourseLeaf by the Friday of spring break week. Functionality to submit proposals will be removed and inactivated until early August. This deadline will be in place to allow sufficient time for department, College, and Graduate Council, UCC and Faculty Senate review/approval. Course and program proposals submitted prior to the deadline are not guaranteed to be reviewed before the end of the academic year.

**General Ed**

A General Ed Ad Hoc Committee has been formed to look into the policies and procedures of the Gen Ed Committee. Discussion occurred on gen ed.

The meeting adjourned at 12:25 p.m.

Respectfully submitted,

Diane Goede  
Recording Secretary
Present: John Buncher, Martin Coleman (alternate for Psychology), Josef Dorfmeister, Svetlana Kilina, Ben Laabs, Friedrich Littmann (UCC Representative), Megan Orr, Lisa Montplaisir (chair), Gursimran Walia, and Andriy Voronov

Absent: Leah Irish

Registrar’s Proposed Curricular Changes in CourseLeaf

The Registrar’s office proposes a change to the current curricular review procedures at NDSU to separate course change requests into categories of 1) substantive and 2) non-substantive changes (document attached with proposed changes).

Friedrich Littmann asked for feedback from the College Curriculum Committee. The committee suggested moving the non-substantive course changes regarding the addition or deletion of co-pre-requisites with academic departments to the substantive category. Changing co-pre-requisites can affect more than the requesting department.

CourseLeaf Availability

Availability: The CourseLeaf CIM module is available from August through March 18, 2019.

- The CIM module (courses and programs) cannot be accessed and is unavailable for submissions from late March – July of each calendar year.

Proposal Deadline: New and existing program and course proposals MUST be initiated in CIM by the Friday of Spring Break week.

- Course and program proposals submitted after the Friday of Spring Break week will not be considered and the electronic form will be shredded.

General Education: General Education Course requests

- Course submissions (new course seeking general education category approval or existing course seeking new or additional category approval) will only be reviewed during fall semester.

Effective Date of Changes: Programs and courses can take effect at different times during the academic year.

- New courses or changes to existing courses go into effect at the beginning of a full semester.
• New programs and edits to existing programs go into effect the fall of each academic year.

1. **BIOL 364: General Biology and BIOL 370 Cell Biology – prerequisite changes.** The Department is requesting that the prerequisites for BIOL 364 be changed to BIOL 150 and BIOL 151. An introduction to material taught in BIOL 150, including cell respiration, photosynthesis, movement of energy through ecosystems and nutrient cycling, and material taught in BIOL 151, including genetics and evolution, is necessary for students to understand the ecological principles taught in this upper division course. The Department is requesting that the prerequisites for BIOL 370 be changed to BIOL 150 and BIOL 151. An introduction to material taught in BIOL 150, including structure of major molecules, cell structure and movement across cell membranes, cell respiration, and photosynthesis; and material taught in BIOL 151, including DNA structure, the central dogma, mechanisms of cell division and gamete formation and evolution, is necessary for students to understand the cell biology principles taught in this upper division course. This will be tabled until the March 22nd meeting to request letters of support from other departments that may be affected by this change.

2. **CPM 796: Application-Guided Synthesis of Polymers for Materials Design, Coatings and Nanotechnology – new course.** This special topic is designed to bridge the concepts of polymer synthesis with applications area in materials science, nanotechnology and biomaterials. Polymers and polymeric materials are shaping our everyday lives at different length and application scale. This special topic will enable the student to understand how synthetic macromolecules can be converted to a functional materials usable in the areas of coatings science, nanotechnology and materials for medical applications. The topic will be helpful to graduate students working in the area of paints and coatings, materials science, engineering and in pharmaceutical sciences. Andriy Voronov moved this be tabled and discussed further at the March 22nd meeting.

3. **CSCI 372: Comparative Programming Languages – prerequisite change.** This course was rollback from the UCC in include the University attendance policy. This was added. Since this was previously approved by the Committee the chair moved this on to the next level.

4. **CSCI 413: Principles of Software Engineering - prerequisite change.** This course was rollback from the CCC for minor edits to the syllabus. Since this was previously approved by the Committee the chair moved this on to the next level.
5. **PSYC 453: Organizational Psychology – prerequisite changes.** This course had a co-requisite that involved research methods II, some students from outside of PSYC would not meet that requisite and were hindered in their ability to enroll in the course. Minor changes in the course were so that research methods was no longer necessary as a co-requisite; however, the pre-requisites listed below are instituted so that students will come prepared for the course and have a good chance of being successful and attaining the learning objectives. Martin Coleman moved to approve. Josef Dorfmeister seconded the motion. All approved pending memos of support along with an updated syllabus.

6. **PSYC BS/BA: Psychology.** The department instituted an additional option to complete the Capstone. Martin Coleman moved to approve. John Buncher seconded the motion. All approved and the motion carried.

7. **PSYC-MIN: Minor Managerial Psychology.** The department made these changes to match department requirements. Martin Coleman moved to approve. John Buncher seconded the motion. All approved and the motion carried.

8. **STAT-BSBA: BS/BA Behavioral Statistics.** The Psychology Department updated options for the Psychology capstone. Martin Coleman moved to approve. John Buncher seconded the motion. All approved and the motion carried.

9. **STAT 860: Statistical Machine Learning – new course.** This course was rollback from the Graduate School. The department made the requested changes. Since this was previously approved by the Committee the chair moved this on to the next level.

10. **STAT-CERT: Big Data Applied Statistics Analysis Graduate Certificate:** This certificate serves graduate students and working professionals by providing summer online coursework in big data applied statistics analysis, an area which is highly needed in big data era. Participants will learn how to visualize and use statistical learning algorithms to explore big data. Aligned with NDSU's mission, this certificate program addresses the needs and aspirations of people in a changing world and furthers NDSU strategic objective: Expand the educational reach of NDSU by offering programs that meet the needs of North Dakota. Megan Orr motion to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.
11. STAT 711 Basic Computational Statistics using R, STAT 712: Statistical Machine Learning, STAT 713: Introduction to Data Science, and STAT 714 Statistical Big Data Visualization – new courses. The Department of Statistics is in the process of developing an online graduate certificate in applied big data analysis to be offered during the summer semester. This certificate will be designed to attract new students to NDSU. Specifically, this certificate is intended for working professionals looking to expand their knowledge of big data analysis. All of these courses are required for the certificate. This has been tabled until the March 22nd meeting. Friedrich Littmann will speak with Rhonda Kitch to find out if these should be approved and moved on to the UCC when the Big Data Applied Statistics Analysis Certificate is approved.

Respectfully submitted,

Diane Goede
Recording Secretary
Present: John Buncher, Josef Dorfmeister, Leah Irish, Svetlana Kilina, Ben Laabs, Friedrich Littmann (UCC Representative), Megan Orr, Lisa Montplaisir (chair), Mohi Quadir (alternate for CPM) and Gursimran Walia,

Absent: Andriy Voronov

1. **STAT 711: Basic Computational Statistics using R, STAT 712: Statistical Machine Learning, STAT 713: Introduction to Data Science, and STAT 714 Statistical Big Data Visualization – new courses.** The Department of Statistics is in the process of developing an online graduate certificate in applied big data analysis to be offered during the summer semester. This certificate will be designed to attract new students to NDSU. Specifically, this certificate is intended for working professionals looking to expand their knowledge of big data analysis. All of these courses are required for the certificate. The chair of the Statistics Department requested these courses be moved on to the next level rather than waiting for the Big Data Applied Statistics Analysis Certificate to be approved. Megan Orr moved to approve. Josef Dorfmeister seconded the motion. All committee members approved and the motion carried. Minor changes need to be made to the STAT 712 syllabus and in CourseLeaf add the statement that “this course is for the certificate only, and the credits cannot be used for statistics degree.

2. **STAT 462: Introduction to Experimental Design – prerequisite changes.** STAT 462 is a required course for undergraduate students in Behavioral Statistics, but STAT 461 (Applied Regression Models) is not, so it does not make sense for STAT 461 (alone) to be a pre-requisite for STAT 462. STAT 331 (Regression Analysis) is a required class for Behavioral Statistics students. Because STAT 331 and STAT 461 cover similar material, STAT 331 OR STAT 461 is being added as the prerequisite for STAT 462. Megan Orr moved to approve. Josef Dorfmeister seconded the motion. All committee members approved and the motion carried.

3. **STAT 671: Introduction to Experimental Design – bulletin change.** There are no official prerequisites for STAT 662, but it is expected that students taking this course are comfortable with basic concepts of statistical inference as well as regression analysis. These expectations have been added to the Bulletin description. Megan Orr moved to approve. Josef Dorfmeister seconded the motion. All committee members approved and the motion carried.
4. **PSYC 453: Organizational Psychology – prerequisite changes.** This course had a co-requisite that involved research methods II, some students from outside of PSYC would not meet that requisite and were hindered in their ability to enroll in the course. Minor changes in the course were so that research methods was no longer necessary as a co-requisite; however, the pre-requisites listed below are instituted so that students will come prepared for the course and have a good chance of being successful and attaining the learning objectives. Martin Coleman moved to approve. Josef Dorfmeister seconded the motion. All approved pending memos of support along with an updated syllabus. The syllabus was updated and memos of support have been provided. The chair of the committee moved this along to the next level.

5. **CPM Computational Characterization of Materials and Design – new course.** The course will teach students how to solve chemical problems applying computational methods and analyze properties of materials (polymeric materials, nanomaterials and hybrid materials, including bio-based materials). The course discusses how data-driven cheminformatics and computational chemistry methods can be effectively applied to analyze, predict properties and design new chemicals and materials, by rational materials design. Students will learn how use combination of computational chemistry together with cheminformatics methods to do design, creation, organization, management, retrieval, analysis, dissemination, visualization and utilization of chemical information. Experimental design methods in relation to chemical experiments also will be given as an important part of chemical information use to obtain and treat experimental data effectively. Mohi Quadir moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

6. **CPM 796: Application-Guided Synthesis of Polymers for Materials Design, Coatings and Nanotechnology – new course.** This special topic is designed to bridge the concepts of polymer synthesis with applications area in materials science, nanotechnology and biomaterials. Polymers and polymeric materials are shaping our everyday lives at different length and application scale. This special topic will enable the student to understand how synthetic macromolecules can be converted to a functional materials usable in the areas of coatings science, nanotechnology and materials for medical applications. The topic will be helpful to graduate students working in the area of paints and coatings, materials science, engineering and in pharmaceutical sciences. The requested updates have been made. Mohi Quadir moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

7. **BIOL 273: Undergraduate Research Course: Genomic Analysis: new course.** Genomics is quickly becoming an important research area in biology, with implications in both health-related and wildlife related careers. Students who have experience in genomics tools will be better prepared for these careers. This
class will prepare undergraduates to enter professional programs in genetic
counseling or research careers in genomics. In our last external review, our
department was encouraged to increase expertise in genomics, and we have
been working toward these faculty hires. This class is a natural extension of
adding this expertise to our department. This will complement the class in
biomedical genetics and genomics currently offered by our department and play
an important role in training students enrolled in the biological genomics minor.
Lisa Montplaisir moved to approve. Josef Dorfmeister seconded the motion. All
approved and the motion carried.

8. BIOL-Minor: Biological Genomics – new program proposal. Genomics is
quickly becoming an important research area in biology, with implications in both
health-related and wildlife related careers. Students who have experience in
genomics tools will be better prepared for these careers. This minor will prepare
undergraduates to enter professional programs in genetic counseling or research
careers in genomics. This program will also prepare graduates interested in
healthcare for personalized medicine by working with existing programs to
increase genomic expertise among STEM students who will become physicians
and biomedical researchers. In our last external review, our department was
encouraged to increase expertise in genomics, and we have been working
ward these faculty hires. This minor is a natural extension of adding this
expertise to our department. There are currently no genomics majors or minors
for undergraduates available at NDSU. Lisa Montplaisir moved to approve.
Josef Dorfmeister seconded the motion. All approved and the motion carried.

9. BIOL 364: General Biology and BIOL 370 Cell Biology – prerequisite
changes. The Department is requesting that the prerequisites for BIOL 364 be
changed to BIOL 150 and BIOL 151. An introduction to material taught in BIOL
150, including cell respiration, photosynthesis, movement of energy through
ecosystems and nutrient cycling, and material taught in BIOL 151, including
genetics and evolution, is necessary for students to understand the ecological
principles taught in this upper division course. The Department is requesting that
the prerequisites for BIOL 370 be changed to BIOL 150 and BIOL 151. An
introduction to material taught in BIOL 150, including structure of major
molecules, cell structure and movement across cell membranes, cell respiration,
and photosynthesis; and material taught in BIOL 151, including DNA structure,
the central dogma, mechanisms of cell division and gamete formation and
evolution, is necessary for students to understand the cell biology principles
taught in this upper division course. Memos of support have been provides by
departments that are affected by this change. Lisa Montplaisir moved to
approve. John Buncher seconded the motion. All approved and the motion
carried.
10. BIOL 370: Cell Biology – prerequisite changes. The Department is requesting the prerequisites for this course be changed to BIOL 150 and BIOL 151. An introduction to material taught in BIOL 150, including structure of major molecules, cell structure and movement across cell membranes, cell respiration, and photosynthesis; and material taught in BIOL 151, including DNA structure, the central dogma, mechanisms of cell division and gamete formation and evolution, is necessary for students to understand the cell biology principles taught in this upper division course. Lisa Montplaisir moved to approve. Josef Dorfmeister seconded the motion. All approved and the motion carried.

Respectfully submitted,

Diane Goede
Recording Secretary
Subject: Re: Spring curriculum meetings

Importance: High

Hello all,

There are two items in CourseLeaf for us to review. I believe the Psyc course we've seen before but back from edits. Unfortunately the history is erased on it so I'm not sure what edits needed to be made so review as you would a new entry.

The second is on stage 1 and we'll see it again next year. It is multidisciplinary and involves three colleges.

We can either meet next week or do this electronically.

Lisa Montplaisir

The course Psych 453 is still available in the 'University Curriculum Committee' queue if you want to compare what we decided. The course description of 453 was changed, and that means that 653 needs to be edited and sent up the chain as well (which we forgot to consider when we passed 453).

Based on the discussion at UCC we might actually be able to do Psych 653 by email, since the course itself was fine.

Best,
Friedrich Littmann

Hi all,

Just re-pushing this to the top. Let's do this electronically. If you have any concerns, please let us know before Friday. Otherwise I will advance the courses. I will use Friedrich's email as the motion to approve. Next one to respond is the second :)

Lisa Montplaisir

Second

Leah A. Irish