

**MINUTES OF
UNIVERSITY COMMITTEE ON CURRICULA**

October 9, 2019

Present: A. Gabriele, C. Christopher, C. Nedrow, D. Wallace, G. Pohl, J. Zhu, K. Strong, M. Fienup, P. Pease, R. Kidwell, S. Riehl, G. Rhineberger-Dunn, L. Fenech

Absent: D. Heistad, K. Martin, J. Morrow, J. Smothers, D. Power

Guests: M. Clayton, T. Spradling, L. Strauss, E. Wallingford, S. Morgan, L. Escalada, L Riedle, C. Weeks, D. Manusos, C. Miller, T. Kidd

The meeting was called to order by P. Pease at 3:00 p.m. in the Presidential Room, Maucker Union.

I. Welcome and Introductions

P. Pease welcomed all present. Introductions followed.

II. Approval of Minutes – October 2, 2019

S. Riehl moved to approve the October 2, 2019 minutes. M. Fienup seconded. P. Pease asked for corrections to the minutes. Hearing none.

P. Pease called for a vote to approve the October 2, 2019 minutes. Motion passed unanimously.

III. Curriculum review procedures for Consent Agenda Items – All Departments

S. Riehl moved, J. Zhu seconded, to approve the consent agenda.

P. Pease asked if there was any discussion or request to remove something from the consent agenda.

M. Fienup asked for the EET-BS major to be moved from consent to regular agenda.

Chair Pease called for a vote on the motion to approve the consent agenda, with the exception of the EET-BS major moving from consent to regular agenda. Motion passed unanimously.

Consent Agenda Items – Programs

- BIOTCHG-MINOR: Biology Minor - Teaching (edited; change in methods course)
- CHEM-BA: Chemistry Major (edited; required course being renumbered)
- CHEM-MINOR: Chemistry Minor (edited; adding elective options)
- CHEMNOTE-NOTE: Chemistry Note (edited)
- CHEMTCHG-BA: Chemistry Major – Teaching (edited; renumbering of course; change in required methods course)
- ASTRONOMY-MINOR: Astronomy Minor (edited; one required course being edited)
- EARTHSCI-BA: Earth Science Major (edited; change in one required course)
- EARTHSCITCHG-BA: Earth Science Major-Teaching (edited; courses)
- EARTHSCITCHG-MINOR: Earth Science Minor – Teaching (edited; change in one course)
- MATHTCHG-BA: Mathematics Major – Teaching (edited; dropping an elective option)
- PHYSICSTCHG-BA: Physics Major – Teaching (edited; changing methods course)
- ALLSCITCHG-BA: Comprehensive Secondary Science Teaching Major- Extended Program (edited; changing methods course, one course being edited)
- MIDJRHGSCITCHG-BA: Middle-Level Science Teaching Dual Major (edited; updating methods course)

- TECH-BAS: Technology Major (edited; dropping of a course)
- TECHMGMT-BA: Technology Management Major (edited; dropping a course)

Consent Agenda Items – Courses

- BIOL 4193/5193 Methods for Teaching Life Science (dropped)
- CHEM 1120 General Chemistry II (substantive; description)
- CHEM 2010 Chemical Safety Seminar (substantive; dropping graduate level; prerequisite)
- CHEM 4620/5620 Special Problems in Chemistry (substantive; may be repeated; term offered)
- CS 1310 Programming Environments for Elementary Education (editorial; course number; description)
- CS 1320 Fundamentals of Programming (editorial; title)
- CS 3160/5610 Artificial Intelligence (substantive; description; 3-4 credits to 3; terms offered)
- CS 3730/5730 Project Management (substantive; prerequisites)
- CS 4410/5410 System Security (substantive; prerequisites and pre-or-co-requisites)
- EARTHSCI 1100 Astronomy (substantive; 3-4 credits to 3 credits; description)
- MATH 3313 Topics in Secondary Mathematics (substantive; requisites)
- PHYSICS 1800 Projects in Basic Robotics and Sensors (dropped)
- SCI ED 3300/5300 Orientation to Science Teaching (substantive; description; terms offered)
- SCI ED 4700/5700 Methods for Teaching Physical Science (dropped)
- TECH 1019 Introduction to Technology and Engineering Education (dropped)
- TECH 1022 Communication Technology (dropped)
- TECH 2119 Computer Applications in Technology (substantive; terms offered; frequency)
- TECH 3101/5101 History and Philosophy of Career and Technical Education (dropped)
- TECH 3114 Product Development and Enterprise (substantive; frequency)
- TECH 3120 Technology and Engineering Education Curriculum Planning (dropped)
- TECH 3160/5160 Computer-Aided Instrumentation and Interfacing (substantive; prerequisites)
- TECH 3164 Programmable Logic Controllers-PLCs (substantive; prerequisites)
- TECH 3168/5168 Technology Training Strategies (dropped)
- TECH 3181/5181 Instructional Design for Career and Technical Education (dropped)
- TECH 3190/5190 Technology and Engineering Education Teaching Methods (dropped)
- TECH 3191/5191 Implementing Career and Technical Programs (dropped)
- TECH 3193/5193 Evaluation in Career and Technical Programs (dropped)
- TECH 4195/5195 Technology and Engineering Education Laboratory Management (dropped)

IV. Curriculum review procedures for the curriculum proposals of the Department of Biology

S. Riehl moved, J. Zhu seconded, to approve the Department of Biology curriculum packet.

Agenda Item – Program

- BIOTCHG-BA: Biology Major - Teaching (edited; change in methods course)

BIOTCHG-BA: Biology Major – Teaching: S. Riehl indicated there is a hidden prerequisite of BIOL 3101 for BIOL 3102. The pre-readers asked there to be a re-wording on the footnote regarding BIOL 3102. T. Spradling explained that the footnote wording has been adjusted. S. Riehl noted that the prerequisite for BIOL 3102 should be listed first in the footnote. P. Pease asked if BIOL 3101 should be added into the major since it's a hidden prerequisite. S. Riehl explained because BIOL 3102 is an option and not a required course, BIOL 3101 doesn't need added into major, the footnote suffices. D. Wallace will edit so the prerequisite wording is the first thing stated in the footnote.

S. Riehl indicated for EARTHSCI 1320, the prerequisite of EARTHSCI 1300 is waived for Biology Teaching majors. T. Spradling added a footnote regarding this.

S. Riehl mentioned there were formatting issues in the proposal. T. Spradling explained they re-formatted courses in the program so the total hours add up correctly and they moved the SCI ED 4800 course to the Methods section in the major.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Biology pending edits discussed. The motion passed unanimously.

V. Curriculum review procedures for the curriculum proposal of the Department of Chemistry & Biochemistry

S. Riehl moved, J. Zhu seconded, to approve the Department of Chemistry & Biochemistry curriculum packet.

Agenda Item – Programs

- BIOCHEM-BA: Biochemistry Major (edited; renumbering of required course)
- BIOCHEM-BS: Biochemistry Major (edited; renumbering of required course)
- CHEM-BS: Chemistry Major (edited; renumbering of required course)

BIOCHEM-BA: Biochemistry Major: S. Riehl noted BIOL 3140 has a hidden prerequisite of BIOL 2051. L. Strauss indicated the Biology department waives BIOL 2051 for Biochemistry majors. S. Riehl mentioned that should be added somewhere so students are aware. L. Strauss asked if we can add a footnote for BIOL 3140 regarding BIOL 2051 being waived as a prerequisite. T. Spradling indicated she would prefer a footnote so it's not confusing for other majors. D. Wallace will add footnote stating for BIOL 3140, the prerequisite of BIOL 2051 is waived for Biochemistry majors.

BIOCHEM-BS: Biochemistry Major: Same issue as BA. No further questions. D. Wallace will add footnote stating for BIOL 3140, the prerequisite of BIOL 2051 is waived for Biochemistry majors.

CHEM-BS: Chemistry Major: S. Riehl asked what the cognate course is for this BS major. L. Strauss read what the cognate course definition is. She indicated the Physics and Calculus courses are the cognate courses. In the previous numbering system, PHYSICS 1701 and 1702 were considered upper level courses (100 level). When courses were re-numbered in 2011, PHYSICS 1701 and 1702 were considered lower level (1000 level). M. Fienup asked why the department has General Physics (PHYSICS 1511 and 1512) as an option if PHYSICS 1701 and 1702 are what the department is considering as cognate courses. C. Weeks indicated it would cause scheduling issues if PHYSICS 1511 and 1512 were not options. C. Weeks mentioned the only BS program that actually has an upper level cognate option is the Biochemistry BS major, and since the courses have been re-numbered, cognates haven't been listed as upper level since 2011. L. Strauss indicated the cognate courses are the 8 hours of Physics and Calculus. S. Riehl mentioned if the BA is truly different than BS, there should be a defined cognate course in the BS degree, and she doesn't see it in this major. C. Weeks indicated the only change to this major is the course number change of CHEM 4010 to 2010, nothing changed with the cognate courses. S. Riehl mentioned the issue is that there isn't a whole lot of difference between the BA and BS degree when looking at the requirements on paper. She would encourage an upper level cognate course be added. M. Fienup explained the issue is that there is an option to take General Physics (PHYSICS 1511 and 1512), which are not cognate courses, and students should be required to take PHYSICS 1701 and 1702, which used to be upper level before the

numbering change. P. Pease recommends we look at the catalog to see if that needs cleaned up. S. Riehl mentioned the definition of a cognate course is not clearly defined.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Chemistry & Biochemistry. The motion passed unanimously.

VI. Curriculum review procedures for the curriculum proposal of the Department of Computer Science

S. Riehl moved, J. Zhu seconded, to approve the Department of Computer Science curriculum packet.

Agenda Items – Courses

- CS 2150 Computing Data Science (added)
- CS 2310 Foundational Concepts in Computer Science (added)
- CS 3310/5310 Teaching and Learning Programming (added)
- CS 3320/5320 Data Structures and Algorithms (added)
- CS 4330/5330 Methods for Teaching Computer Science (added)

CS 2150 Computing Data Science: S. Riehl indicated this is a new course. M. Fienup mentioned this course has never been taught before, and he feels the syllabus is weak. This course is being added for the new Data Science minor. P. Pease asked if this course has been taught experimentally, E. Wallingford indicated it has not. A. Gabriele asked about resources since this is a new course. E. Wallingford explained they are offering CS 1000 less often, they will offer CS 1000 once per year now instead of once per semester. Enrollment in CS 1000 has been dropping, so offering it less will be OK.

CS 2310 Foundational Concepts in Computer Science: J. Zhu mentioned this course isn't in any program. M. Fienup indicated this course (and the rest of the new courses below) are for a Certificate in Computer Science Education that will be offered in the future. P. Pease asked what kind of demand they are seeing for the Computer Science Teaching Certificate. E. Wallingford indicated currently 15-20 people, and another co-hort will be starting.

S. Riehl indicated this course was taught at the graduate level in Summer 2019, but it doesn't have a 5000 level course associated with it. E. Wallingford explained the course was offered as a graduate workshop at the time, and the group decided it's not appropriate for a graduate level course. S. Riehl indicated the prerequisite is fine as is if this course is not offered as a graduate level course.

A. Gabriele asked if anyone besides teaching majors would take this course. E. Wallingford indicated no, only teaching majors and current teachers. A. Gabriele asked about the prerequisite of TEACHING 2017, should the prerequisite also include "officially admitted into Teacher Education Program"? Did they leave that off so students outside of Teacher Education could take course? E. Wallingford will have to ask, but this course is ultimately intended for current teachers. He would be happy to change the prerequisite if it makes more sense. S. Riehl mentioned the prerequisite makes sense as is so students can start their coursework sooner than being admitted into the Teacher Education Program. C. Christopher indicated this course is for students who are already certified teachers and want to add a Computer Science endorsement. L. Escalada asked if there could be a note added saying "this course is for teaching majors". S. Riehl indicated in the course description it mentions "Give potential teachers..." which should suffice. E. Wallingford clarified that the course is only intended for teachers, not regular CS majors.

CS 3310 Teaching and Learning Programming: S. Riehl indicated a minor issue, they are using an old course number in the prerequisites. D. Wallace will edit prerequisites (CS 1140 is now CS 1320).

CS 3320 Data Structures and Algorithms: S. Riehl indicated a minor issue, they are using an old course number in the prerequisites. D. Wallace will edit prerequisites (CS 1140 is now CS 1320).

CS 4330 Methods for Teaching Computer Science: No questions.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Computer Science, pending edits discussed. The motion passed unanimously.

VII. Curriculum review procedures for the curriculum proposals of the Department of Mathematics

S. Riehl moved, J. Zhu seconded, to approve the Department of Mathematics curriculum packet.

Agenda Items – Program

- DATASCIENCE-MINOR: Data Science (added)

Agenda Items – Course

- STAT 4784/5784 Introduction to Machine Learning (added)

DATASCIENCE-MINOR: Data Science: E. Wallingford explained CS 2150 is going to be alternate prerequisite for CS 3140. CS 3140 has prerequisite of CS 1520 and CS 1800, but Data Science minors are taking CS 2150 as a prerequisite instead. The course description for CS 3140 needs “or CS 2150 for Data Science minors” added to the prerequisite. D. Wallace will edit. M. Clayton asked if they should also add “or consent of instructor”.

M. Fienup asked if it’s better to require CS 2150 or CS 1520 and CS 1800 in the minor. M. Clayton indicated that could be viable option, and E. Wallingford said that is fine to update the requirements for the minor. D. Wallace will edit so it shows CS 2150 or CS 1520 and CS 1800 in the requirements for the minor.

D. Mupasiri sent a new proposal to clean up the introductory paragraph. The new proposal also adds STAT 1772 in the minor as it’s a hidden prerequisite for STAT 4784. D. Wallace will edit so the hours show correctly. D. Wallace will also change the undergraduate research requirement to 2-3 credits as MATH 4990 is only offered as 3 credits.

STAT 4784 Introduction to Machine Learning: M. Fienup is unclear on the prerequisites. Should the slash be an “or”? Also, the commas should be semi colons. D. Wallace will edit.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Mathematics, pending edits discussed. The motion passed unanimously.

VIII. Curriculum review procedures for the curriculum proposals of the Department of Physics

S. Riehl moved, J. Zhu seconded, to approve the Department of Physics curriculum packet.

Agenda Items – Courses

- PHYSICS 3050 Robotics and Sensors (added)
- PHYSICS 4160/5160 Data Visualization, Modeling and Simulation (added)
- PHYSICS 4700/5700 Electrodynamics (substantive; requisites; terms offered) – MOVED TO CLEAN-UP MEETING

PHYSICS 3050 Robotics and Sensors: S. Riehl indicated this is a new course. She mentioned there is no library consult added.

J. Zhu mentioned this course is listed as a “same as” course to TECH TEE 3050, however these two courses have different terms offered and different course descriptions. D. Wallace indicated everything needs to match if they are to be cross listed. K. Strong explained they were originally proposed as two different courses, but then they were encouraged to combine them into one course. M. Clayton indicated there were extensive discussions on these courses. M. Fienup indicated the current issue is that in Leepfrog the courses don’t match. M. Clayton explained there is one sentence that is different between the two course descriptions. T. Kidd is OK adding extra sentence to the PHYSICS 3050 course. D. Wallace will edit so the course descriptions match.

M. Fienup asked which department primarily teaches this course. M. Clayton indicated this course is currently taught from the Physics department. A. Gabriele asked if they are cross listed so the Technology department can also teach the course. M. Clayton explained the idea is to have students from each department take the course, and for faculty from each department to teach the course.

The term offering needs to be changed to variable for both courses per M. Clayton. D. Wallace will update.

J. Zhu asked about the lecture/lab explanation in the course description, and if it actually equals 3 credits. K. Strong asked if we could remove the lecture/lab explanation entirely from course description. D. Wallace will edit.

PHYSICS 4160 Data Visualization, Modeling and Simulation: This is a new course. No questions.

PHYSICS 4700 Electrodynamics: S. Riehl indicated there needs to be clarification of prerequisites. P. Shand had indicated prior to the meeting that PHYSICS 4600 should be listed as a pre or corequisite. A. Gabriele mentioned the department could be trying to create more flexibility by moving the prerequisites to pre or corequisites. K. Strong is opposed to moving the prerequisites to pre or corequisites, as it would be setting students up for failure. Committee proposed to move this course to clean-up so P. Shand can be present to clarify.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Physics, excluding PHYSICS 4700. The motion passed unanimously.

IX. Curriculum review procedures for the curriculum proposals of the Department of Science Education

S. Riehl moved, J. Zhu seconded, to approve the Department of Science Education curriculum packet.

Agenda Items – Course

- SCI ED 4800/5800 Methods for Teaching Secondary Science (added)

SCI ED 4800 Methods for Teaching Secondary Science: S. Riehl indicated this is a new course. L. Escalada explained this course is something that’s been in the works for some time. Adding this class addresses staffing and enrollment issues. SCI ED 3300 is currently offered fall and spring, so the proposal is to offer SCI ED 3300 once per year (spring), and to offer SCI ED 4800 once per year (fall). They are also eliminating the field experience requirement in SCI ED 3300, and increasing the number of field experience hours required in SCI ED 4800.

A. Gabriele asked if SCI ED 3300 (spring course) is supposed to be taken before SCI ED 4800 (fall course). L. Escalada answered yes. A. Gabriele asked if they are anticipating students getting out of sequence, and would they have to wait a year to get back in sequence. Is there enough flexibility of other courses to take so they don’t lengthen their time at UNI? L. Escalada explained they do individual advising, so they have been proactive with their students and letting them know about this upcoming change. They have been telling students since last year that SCI ED 3300 and 4800 will only be offered once per year.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Science Education. The motion passed unanimously.

X. Curriculum review procedures for the curriculum proposals of the Department of Technology

S. Riehl moved, J. Zhu seconded, to approve the Department of Technology curriculum packet.

Agenda Items – Programs

- EET-BS: Electrical Engineering Technology (EET) Major (edited) (moved from consent agenda) – MOVED TO CLEAN-UP MEETING
- ELECTECH-MINOR: Electrical and Electronics Technology Minor (edited)
- MFGTECH-BS: Manufacturing Engineering Technology Major (edited)
- TECHEDTCHG-BS: Technology and Engineering Education Major – Teaching (edited)

Agenda Items – Courses

- TECH TEE 2020 Transportation Technology (added)
- TECH TEE 3000/5000 Technology and Engineering Education (added)
- TECH TEE 3050 Robotics and Sensors (added)
- TECH TEE 3100/5100 Technology and Engineering Education Curriculum Planning (added)
- TECH TEE 3150/5150 Technology Engineering Education Lab Management (added)
- TECH TEE 4100 Technology and Engineering Education Level 3 Teaching Experience (added)
- TECH TEE 4200/5200 Technology and Engineering Education Methods (added)
- TECH TEE 4300/5300 Career and Technical Education Methods (added)

EET-BS: Electrical Engineering Technology (EET) Major (pulled from consent agenda): M. Fienup indicated there is a hidden prerequisite – ENGLISH 3772 has prerequisite of ENGLISH 1005, so this program is actually 80 hours. He also indicated there are 10 hours of double counting within LAC (so program is technically 70 hours). The curriculum handbook indicates a maximum of 68 credits for BS degrees. An option would be to shorten the program by 2 hours, as this program is not currently listed as an extended program. A. Gabriele asked if at the time they labeled themselves as extended, would we have accepted it as an extended program back then. D. Wallace explained they were grandfathered in, and going forward extended programs can't add any additional hours to their already extended program. P. Pease mentioned extended programs are explicitly listed as such in the catalog. D. Wallace said changes were made to the EET BS major in 2014 and 2015, but she is not sure what those changes were. S. Riehl mentioned if we shred this proposal, the issue won't be corrected. J. Zhu indicated the only change to this program is adding additional math options. K. Strong explained transfer students who transfer in Calculus 1 and 2 previously did not satisfy the math requirement.

The committee decided this program needs more discussion, and will be sent to cleanup. G. Pohl would like to see what Technology department would like to do with this program.

ELECTECH-MINOR: Electrical and Electronics Technology Minor: J. Zhu indicated there were no changes to this minor. This program needs shredded from proposals. D. Wallace will shred.

MFGTECH-BS: Manufacturing Engineering Technology Major: TECH 4210 is a corequisite for TECH 4110, but TECH 4110 doesn't have TECH 4210 listed as a corequisite. J. Zhu suggested removing the corequisite of TECH 4210 for TECH 4110. What the department wants is students to take TECH 4110 before TECH 4210. K. Strong asked if D. Wallace could make a late change, to remove "first semester culminates..." from the course description for TECH 4210, since students take this course in their senior year.

M. Fienup indicated ENGLISH 3772 has hidden prerequisite of ENGLISH 1005. ENGLISH 1005 needs listed in the program. D. Wallace will edit, and update total hours.

TECHEDTCHG-BS: Technology and Engineering Education Major – Teaching: S. Riehl asked about TECH TEE 3000 – this course is actually TECH TEE 1000, with no 5000 level option. D. Wallace will edit. TECH TEE 2010 should be TECH TEE 3050 (robotics course). D. Wallace will also edit. K. Strong indicated the changes to this program were made to get into compliance. S. Riehl asked if we had a library consult, it is confirmed consult is there.

TECH TEE 2020 Transportation Technology: A. Gabriele mentioned while reading course descriptions of added TECH TEE courses, he thinks some could be copy edited.

TECH TEE 3000 Technology and Engineering Education (TECH TEE 1000): This should be TECH TEE 1000. D. Wallace will edit.

TECH TEE 3050 Robotics and Sensors: No questions.

TECH TEE 3100 Technology and Engineering Education Curriculum Planning: M. Fienup asked how this course differs from TECH TEE 3000 (1000), D. Manusos indicated TECH TEE 3000 (1000) is an introductory course, and TECH TEE 3100 is more advanced. There is a component of curriculum planning in TECH TEE 3000 (1000), but goes deeper into the topic in TECH TEE 3100.

TECH TEE 3150 Technology Engineering Education Lab Management: No questions.

TECH TEE 4100 Technology and Engineering Education Level 3 Teaching Experience: Edits are needed in the course description and corequisites. D. Wallace will edit.

TECH TEE 4200 Technology and Engineering Education Methods: No questions.

TECH TEE 4300 Career and Technical Education Methods: No questions.

P. Pease asked if there is any further discussion. Hearing none.

Chair Pease called for a vote on the motion to approve the curriculum packet from the Department of Technology, excluding the EET-BS major. The motion passed unanimously.

XI. Next meeting – Wednesday, October 16, 3:00pm, Presidential Room, Maucker Union

Discussion of Clean-up of previously tabled proposals – Health, Recreation and Community Services, School of Applied Human Sciences, Department of Communication Studies, Physics Department, Technology Department.

The meeting adjourned at 4:57pm

TABLED ITEMS FOR CLEAN-UP MEETING:

- EET-BS: Electrical Engineering Technology (EET) Major (edited)
- PHYSICS 4700/5700 Electrodynamics (substantive; requisites; terms offered)

Respectfully submitted,

Rachelle Kidwell
Office of the Registrar

cc: UCC
GCCC
Guests