MICHIGAN STATE UNIVERSITY

Report of
THE UNIVERSITY COMMITTEE ON CURRICULUM
to the Faculty Senate
January 16, 2018

The effective date for new programs subject to Statewide Academic Program review is implemented in accordance with the Statewide Academic Program Review calendar.
This report is prepared and distributed for the following purposes:

1. To report new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses.
2. To notify the initiating colleges, schools, and departments of approval by the University Committee on Curriculum of their requests for new academic programs, changes in academic programs, discontinuations of academic programs, new courses, permanent changes in courses, and deletions of courses. Any items not approved by the Faculty Senate will be reported to the appropriate college and department or school.
3. To provide information to members of the faculty in each department about academic programs and courses in all colleges, departments, and schools of the University.

Reports of the University Committee on Curriculum to the Faculty Senate are organized as follows:

**PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES:**

Organized by colleges in alphabetical order. For a given college, academic units are organized in alphabetical order. For a given academic unit, degrees, majors, and specializations are organized in alphabetical order.

**PART II - NEW COURSES:**

Organized by academic units in alphabetical order; All-University courses appear last. For a given academic unit, courses are organized according to the names associated with course subject codes, in alphabetical order. Courses with the same subject code are in numerical order.

**PART III - COURSE CHANGES:**

Organized by academic units in alphabetical order; All-University courses appear last. For a given academic unit, courses are organized according to the names associated with course subject codes, in alphabetical order. Courses with the same subject code are in numerical order.

Not all of the above categories, and not all of the colleges and academic units, will necessarily appear in any given Senate Report.

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1One or more of the abbreviations that follow may be included in a course entry:

- **P:** Prerequisite monitored in SIS
- **C:** Corequisite
- **R:** Restriction
- **RB:** Recommended background
- **SA:** Semester Alias
MICHIGAN STATE UNIVERSITY
January 16, 2018

TO: Faculty Senate
FROM: University Committee on Curriculum
SUBJECT: New Academic Programs and Program Changes: New Courses and Course Changes

PART I - NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF ARTS AND LETTERS

1. Change the requirements for the Disciplinary Teaching Minor in Spanish that is available for secondary teacher certification in the Department of Romance and Classical Studies. The Teacher Education Council (TEC) approved this request at its November 6, 2017 meeting.

   a. Under the heading Spanish-Secondary make the following changes:

      (1) Delete the following:

           One of the following courses:
           SPN 420 Spain and its Literature     3
           SPN 432 Latin America and its Literature    3

      Add the following:

           FLT 807 Foreign Language Teaching Methods   3
           or
           LLT 307 Methods of Second and Foreign Language Teaching  3

   Effective Summer 2018.

ELI BROAD COLLEGE OF BUSINESS

1. Establish a Master of Science degree in Management Studies in the Eli Broad College of Business. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its September 11, 2017 meeting.

   a. Background Information:

      The Master of Science Degree in Management Studies was developed to provide early career engineers and STEM-related graduates with business acumen and skill sets for immediate application in their work. Engineers and STEM-related graduates are employed by many diverse organizations and industries, including manufacturing, chemical, information technology, analytics, insurance, environmental, energy, and aerospace. Engineering planning, design, and implementation are made within the context of business decisions. Engineers with an understanding of business can connect engineering decisions with the current business environment to make valuable contributions to strategic company goals.

      Frequently, engineers who excel in their positions are promoted to management roles in companies. Often, they find that the same skills that helped them to flourish as engineers is not the same knowledge that is needed in management roles. Out of necessity, many engineer managers seek to build their business knowledge through M.B.A. or M.S. programs or other professional education. Some decide to leave engineering to study fulltime in M.B.A. or M.S. programs; historically, about one-third of all fulltime M.B.A.
Broad College students majored in engineering as undergraduates. However, not all engineers who have a need for business education can afford to take two years to acquire an M.B.A.

The global business world in which engineers are employed is highly competitive, driven by economics, technology, and innovation. It is important to develop engineers who have an integrative view of business beyond the engineering role and can provide insightful business perspectives. Many large corporations have developed rotational programs to offer newly graduated engineers an understanding of the business culture and how it relates to engineering roles. The primary employer target audience is comprised of small and medium size firms, which often do not have the resources to develop engineers in the same way that large firms do. Consequently, when engineers are promoted to management positions in mid-size and small firms, they may not have the business expertise necessary for management.

Recognizing the challenge noted above, Broad College of Business and the MSU College of Engineering have been in discussion for several years to find a solution. In the past, other universities have developed M.S. in Engineering Management programs to meet the need for greater business knowledge for engineers, offered by colleges of engineering. Most of these programs are quantitative and engineering-focused and delivered entirely face-to-face in traditional classroom settings. Recently, several well-regarded business colleges have begun to offer M.S. programs in management that concentrate on traditional business disciplines. Since there are still not many M.S. programs for early-career engineers available, there is an opportunity for MSU to develop a niche with the proposed Master of Science Degree in Management Studies.

In developing the management studies curriculum, Broad College of Business has partnered with the MSU College of Engineering, researched U.S. engineering and STEM-related majors and degree completion, reviewed programs that are currently available, and interviewed and surveyed executives in large and mid-size firms. The proposed 30-credit hybrid degree begins immediately after the undergraduate degree is completed, starting in the classroom and continuing in online and experiential content when the student becomes employed.

The MS-Management Studies (MS-MS) delivers a variety of courses from all Broad College disciplines, derived from the fulltime M.B.A. program and other Broad degrees, to recent engineering graduates. It offers employers the ability to design specific company-related projects for MS-MS students. It is designed to build on Broad College’s strong relationship with the College of Engineering and the many corporate connections that both colleges have. We believe that this is a critical time to launch the Master of Science Degree in Management Studies for MSU students and other engineering and STEM-related graduates.

In recent years, Michigan State University has championed the concept of the “T-shaped professional”, developing students who have not only disciplinary knowledge, but are active learners and boundary spanners. The MSU March 2015 T-Summit described the T-shaped professional as needing “educational and work experiences that help move them learn how to handle information from multiple sources.” The curriculum embodies the spirit of the T-shaped professional in preparing recent undergraduates to develop T-shaped characteristics. Early career engineers, statisticians and scientists need to be ready to absorb new information and combine it with a business perspective. Business knowledge and insights will be essential when individuals are offered new roles in management.

The degree is designed to meet at the crossroads between undergraduate degree completion and career. The program begins in the summer and progresses through the next academic year with degree completion in May. The schedule, with fulltime classes in the summer followed by online courses while working, is planned in collaboration with employers. A capstone project will be based in the company environment and address a current business gap, dilemma, or problem. The program brings together business courses and fulltime work, allowing for valuable business insights in early career individuals.

Initially, the focus for the program will be on MSU engineering graduates. The College of Engineering graduates over 800 students annually and has partnered with Broad College
in program planning. There are a number of key employers who recruit at both the College of Engineering and the Broad College and those corporate collaborations will be very important to the program development. Initial interviews and surveys with corporate executives indicate that there is substantial interest in the proposed program.

Concentrating on recent MSU graduates and relationships with firms that recruit heavily at MSU, provides a unique perspective on early career development. While there are several similar degrees in Michigan and elsewhere, the design of the MSU degree offers an alternative strategy specifically targeted at MSU graduates. Currently, MSU has no graduate programs that address the needs of engineering and STEM early-career professionals. The Master of Science Degree in Management Studies, integrates technical and engineering learning with business disciplinary perspectives to create adaptive and comprehensive knowledge for careers of the future.

b. Academic Programs Catalog Text:

The global business world is highly competitive, driven by economics, technology, and innovation, and change is constant. In many fields, the career assumptions of the past will not be valid for occupations of the future. Increasingly, fast-paced decisions must be made by professionals in many roles who can work across company divisions and take into account many different perspectives. It is important to develop professionals from many fields who have an integrative view of business and can provide insightful business perspectives.

The Master of Science Degree in Management Studies offers a broad range of business disciplines directed at early-career professionals. Essential business knowledge and skill sets are represented in accounting, finance, marketing, supply chain, and management. The program features courses in teamwork and leadership, persuasive communication, analytics for decision-making, and project management principles. Meeting at the crossroads between undergraduate degree completion and career, it combines classroom and online learning with work experience, providing a unique on-the-job platform directed at early career professionals in collaboration with the employing organization. The program culminates with a management project class that brings together the various business topics into a comprehensive framework that can be applied as a practicum, paper, or other approach based in the company environment.

In addition to meeting the requirements of the university, students must meet the requirements specified below.

Admission

To be admitted to the Master of Science degree in Management Studies degree, an applicant must:

1. Have a bachelor’s degree from a recognized educational institution. If a candidate applies within 15 credits of graduation for an undergraduate degree, the bachelor’s degree is waived if the applicant has a cumulative grade-point average of 3.00 in the last two years of undergraduate work.
2. Have a cumulative undergraduate grade-point average of 3.00 in the last two years of their program.

International applicants are required to complete the TOEFL or IELTS with minimum scores set by Michigan State University and the program.

Applicants to the program who do not meet the above requirements may provide further documentation of their aptitude by securing a strong score on the Graduate Management Admission Test (GMAT), or Graduate Record Examination (GRE). Michigan State University graduates with a cumulative grade-point average of 3.25 or higher are not required to complete the GMAT or GRE. Waivers of this requirement are only considered for students that have graduated from Michigan State University with a bachelor’s degree.

Admission to the program is selective and meeting the minimum standards listed does not guarantee admission. The applicant's overall record is considered, including the student's
statement of objectives, recommendations, academic transcripts, and other documentation as required.

Requirements for the Master of Science Degree in Management Studies

The Master of Science degree in Management Studies degree is available only under Plan B (without thesis). A total of 30 credits are required for the degree. Other courses as approved by the program director may be used to fulfill degree requirements.

<table>
<thead>
<tr>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All of the following courses (30 credits):</td>
</tr>
<tr>
<td>ACC 822 Information Systems Project Management</td>
</tr>
<tr>
<td>FI 801 Managerial Finance</td>
</tr>
<tr>
<td>MBA 802 Financial Accounting and Reporting Strategy</td>
</tr>
<tr>
<td>MBA 804 Applied Data Analysis for Managers</td>
</tr>
<tr>
<td>MBA 814 Applied Economics</td>
</tr>
<tr>
<td>MBA 821 Introduction to Supply Chain Management Concepts</td>
</tr>
<tr>
<td>MBA 823 Information Technology Strategy</td>
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<tr>
<td>MGT 805 Special Topics in Management</td>
</tr>
<tr>
<td>MGT 824 Developing Managerial Skills</td>
</tr>
<tr>
<td>MGT 840 Leadership and Team Management</td>
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<tr>
<td>MGT 850 Competitive and Business Strategy</td>
</tr>
<tr>
<td>MGT 873 Strategic Decision Making</td>
</tr>
<tr>
<td>MGT 881 Creating an Ethical Organization</td>
</tr>
<tr>
<td>MKT 888 Communication Strategies for Business</td>
</tr>
<tr>
<td>MKT 805 Marketing Management</td>
</tr>
</tbody>
</table>

2. Completion of a final oral examination or evaluation.

Academic Standards

Students must achieve a minimum 2.0 grade in a course in order for that course to count toward the 30 credit degree requirement. Students must maintain a cumulative grade-point average of 3.00 or higher in all graduate courses in order to graduate from the program.

Effective Fall 2018.

2. Establish a Master of Science degree in Healthcare Management in the Eli Broad College of Business. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its September 11, 2017 meeting.

The concentrations in the Master of Science degree in Healthcare Management will be noted on the student’s academic record when the requirements for the degree have been completed.

a. Background Information:

The Master of Science in Healthcare Management program (MS-HCM) was developed to provide healthcare professionals with business frameworks for improved healthcare management decisions. Healthcare organizations depend on effective systems for service, delivery, and performance. There are many emerging issues such as healthcare policy and reform, technology advances, changing demographics, global health problems, and quality and patient satisfaction that benefit from business knowledge, metrics, and perspectives. Trends in healthcare can create competing realities for healthcare managers and organizations related to mergers and acquisitions, supply chain issues, behavioral health, cybersecurity, drug pricing, and cost of care. The healthcare industry is large and growing, with its own set of regulatory and business challenges. The industry needs managers and leaders who are educated in business as well as in the unique issues faced by the healthcare industry. Healthcare management is a broad field that is essential to a number of organizations, including hospitals, pharmaceutical companies, physician associations, surgical centers, medical suppliers, assisted care facilities, medical device and equipment manufacturers, insurance associations, consulting, and public policy.
Increasingly, healthcare organizations are seeking answers that are based in business theory and practice and are hiring M.B.A. and M.S. business students. The professionals in these organizations who do not have business backgrounds are being challenged to gain and use business knowledge that can be applied to their daily work and will advance their careers. Most Master of Healthcare Management programs are offered in public health programs and do not approach healthcare issues using current business perspectives. The Master of Science degree in Healthcare Management was designed to address that gap and contribute to the future of healthcare leadership.

In recent years, the Broad College of Business has initiated joint degrees in partnership with the College of Osteopathic Medicine (DO/MBA) and the College of Human Medicine (MD/MBA). These degrees are offered in response to requests from medical students for needed business knowledge in their medical careers and potential healthcare leadership roles. Since 1964, the Broad College Executive M.B.A. program has consistently enrolled physicians and healthcare professionals seeking greater business knowledge to become healthcare leaders. Graduates in supply chain management and finance are being employed by healthcare organizations for the valuable management skills sets that they have.

The healthcare industry is projected to grow substantially in the next decades. The U.S. Bureau of Labor and Statistics estimates that positions in medical and health services management will grow at an average rate of 17% through 2024. A number of healthcare management issues will influence the need for healthcare business education. These issues are based in the management and coordination of healthcare services, complexities of healthcare policy, healthcare reform, increased competition, an aging population, the expansion of technology in healthcare, and other healthcare problems, gaps, and dilemmas.

The design for the Master of Science degree in Healthcare Management program builds on the knowledge gained through this experience and background. The program is uniquely positioned to combine business perspectives in relation to healthcare issues and settings. The proposed program has been discussed with the Colleges of Human Medicine, Osteopathic Medicine, and Nursing and has their support. We expect to partner with healthcare colleagues at Michigan State and other healthcare professionals for their insights and support for the program.

The Master of Science degree in Healthcare Management will to appeal to healthcare professionals and others who need increased managerial expertise and education to excel in the competitive landscape of healthcare. Michigan State University is a leader in business education through the Eli Broad College of Business and also in healthcare education, with the College of Human Medicine, College of Osteopathic Medicine, and College of Nursing. Currently, MSU has no graduate programs that address healthcare administration from a business perspective and that target the many areas and occupations in the healthcare industry.

The future of healthcare organizations will require professionals who are grounded in management principles, strategic thinking, and innovation. The Eli Broad College of Business is a recognized leader in management education through its M.B.A. programs and its successful M.S. programs.

Many healthcare administration programs accredited by the Commission on Accreditation of Healthcare Management Education (CAHME) are offered by departments or colleges of public health. Most began years ago when healthcare was not viewed as a business and most have a lot of public health content. Relatively few are offered by business colleges and few are offered online, particularly by research-intensive universities. At a time when a challenging healthcare landscape demands sound business decisions, a Broad College program in healthcare administration combines healthcare insights within a solid business framework.

The unique position of the proposed program in Healthcare Management and its online format make it a strategic initiative for the Broad College of Business and Michigan State University. The program offers a platform for expanding the reach of Broad College of Business and promoting excellence in healthcare leadership for our world-grant university.
With this program, MSU and the Broad College of Business have an opportunity to enter a growing market for healthcare business education and obtain significant market share.

The degree will be subject to the requirements of AACSB International, the Association to Advance Collegiate Schools of Business, the accrediting body for business schools, as well as the Commission on Accreditation of Healthcare Management Education (CAHME).

b. Academic Programs Catalog Text:

The Master of Science in Healthcare Management is designed to meet the needs of the healthcare industry and appeal to professionals in many different healthcare and healthcare-related organizations. Healthcare is a large and growing industry with its own set of regulatory and business challenges. The future of healthcare organizations will require professionals who are grounded in management principles, strategic thinking, and innovation.

The program develops depth and breadth in business principles and skills sets within the context of healthcare systems and management. Courses are designed to prepare students to advance to add value to their organizations and advance in their careers. The program emphasizes the changing nature of healthcare and the need for strategic management. The applied course work includes healthcare-specific courses in key business areas such as financial management, marketing, supply chain, and human resource management.

The curriculum also includes critical topics for healthcare management addressed within unique areas to healthcare such as: managing quality, risk, and performance management, healthcare systems and policy, healthcare technology and innovation, and managerial epidemiology. The capstone class integrates the various topics into a comprehensive framework that can be applied as a practicum, paper, or other approach.

In addition to meeting the requirements of the university, students must meet the requirements specified below.

Admission

To be admitted to the Master of Science degree in Healthcare Management degree, an applicant must:

1. Be currently employed in the healthcare industry, including hospitals, pharmaceuticals, physician associations, surgical centers, medical suppliers, assisted care facilities, device manufacturers, insurance, consulting, or in public policy.
2. Have a bachelor’s degree from a recognized educational institution.
3. Have a cumulative undergraduate grade-point average of 3.00 in the last two years of their program.
4. Have a high degree of potential for advancement to an organizational leadership role.
5. Have some background knowledge of and exposure to word processing, spreadsheets, and presentations.

International applicants are required to complete the TOEFL or IELTS with minimum scores set by Michigan State University and the program.

Applicants to the program who do not meet the above requirements may provide further documentation of their aptitude by securing a strong score on the Graduate Management Admission Test (GMAT), or Graduate Record Examination (GRE).

Admission to the program is selective and meeting the minimum standards listed does not guarantee admission. The applicant’s overall record is considered, including the student’s statement of objectives, recommendations, academic transcripts, and other documentation as required.
Requirements for the Master of Science Degree in Healthcare Management

The Master of Science degree in Healthcare Management degree is available only online and only under Plan B (without thesis). A total of 42 credits are required for the degree. The degree consists of a business core (30 credits), a capstone (4 credits), and a concentration (8 credits) in Healthcare Leadership or Healthcare Compliance. Other courses as approved by the program director may be used to fulfill degree requirements.

1. All of the following courses (34 credits):

2. One of the following concentrations (8 credits):
   - **Healthcare Leadership**
     - HCM 817 Healthcare Leadership 2
     - HCM 818 Strategic Decision Making 2
     - HCM 819 Market Analysis and Planning 2
     - HCM 820 Negotiations 2
   - **Healthcare Compliance**
     - HCM 821 Healthcare Regulations 2
     - HCM 822 Healthcare Compliance 2
     - HCM 823 Enterprise Risk Management 2
     - HCM 824 Implementing Compliance Systems 2

3. Completion of a final oral examination or evaluation.

**Academic Standards**

Students must achieve a minimum 2.00 grade in a course in order for that course to count toward the 42 credit degree requirement. Students must maintain a cumulative grade-point average of 3.0 or higher in all graduate courses in order to graduate from the program.

Effective Fall 2018.
COLLEGE OF COMMUNICATION ARTS AND SCIENCES

1. Change the name of the Linked Bachelor of Arts degree in Advertising to Advertising Creative – Master of Arts in Advertising in the Department of Advertising and Public Relations.

   Effective Summer 2017.

2. Establish a Linked Bachelor of Science Degree in Advertising Management and Master of Arts Degree in Advertising in the Department of Advertising and Public Relations. The University Committee on Undergraduate Education (UCUE) approved this request at its October 5, 2017 meeting. The University Committee on Graduate Studies (UCGS) approved this request at its October 9, 2017 meeting.

   Per University policy:

   A candidate for a Linked Bachelor's-Master's Degree from Michigan State University may request the application of up to 9 credits toward the master's program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master's degree. Some colleges with programs that require more than 30 credits for the master's degree may apply more than 9 credits toward the master's degree but not more than 30% of the total number of credits required for the master's degree. Credits applied to the Linked Bachelor's-Master's Program are not eligible to be applied to any other graduate degree program.

   a. Add the following statement in the Department of Advertising and Public Relations:

      LINKED BACHELOR'S-MASTER'S DEGREE IN ADVERTISING
      Bachelor of Science Degree in Advertising Management
      Master of Arts Degree in Advertising

      The department welcomes applications from Michigan State University undergraduate Advertising Management majors with at least 86 credits. Admission applications must be made prior to the final semester as an Advertising Management undergraduate. Admission to the program requires a minimum undergraduate grade-point average of 3.50, a statement of goals for the master's degree, Graduate Record Examination scores, at least two letters of recommendation from faculty in the Department of Advertising and Public Relations and an approved program of study for the master's degree at the time of admission. Admission to the Linked Bachelor’s-Master’s Program allows the application of up to 9 credits toward the master's program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or an external accredited institution. The number of approved credits, not to exceed 9, is applied toward the credit requirement of the master's degree. No 400-level courses with a grade lower than 3.0 will count toward the master’s degree. Credit obtained from 400-level pass-fail courses and internships will not count toward the degree. Credits applied to the Linked Bachelor’s-Master's Program are not eligible to be applied to any other graduate degree program.

   Effective Summer 2017.

3. Change the name of the Linked Bachelor of Arts degree in Advertising to Advertising Creative – Master of Arts in Health and Risk Communication in the Department of Advertising and Public Relations.

   Effective Summer 2017.

4. Change the name of the Linked Bachelor of Arts degree in Advertising to Advertising Creative – Master of Arts in Public Relations in the Department of Advertising and Public Relations.

   Effective Summer 2017.
5. Establish a **Linked Bachelor of Science Degree in Advertising Management** and **Master of Arts Degree in Health and Risk Communication** in the Department of Advertising and Public Relations. The University Committee on Undergraduate Education (UCUE) approved this request at its October 5, 2017 meeting. The University Committee on Graduate Studies (UCGS) approved this request at its October 9, 2017 meeting.

Per University policy:

A candidate for a Linked Bachelor's-Master's Degree from Michigan State University may request the application of up to 9 credits toward the master's program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master's degree. Some colleges with programs that require more than 30 credits for the master's degree may apply more than 9 credits toward the master's degree but not more than 30% of the total number of credits required for the master's degree. Credits applied to the Linked Bachelor's-Master's Program are not eligible to be applied to any other graduate degree program.

a. Add the following statement in the Department of Advertising and Public Relations:

**LINKED BACHELOR’S-MASTER’S DEGREE IN HEALTH AND RISK COMMUNICATION**

* Bachelor of Science Degree in Advertising Management
* Master of Arts Degree in Health and Risk Communication

The department welcomes applications from Michigan State University undergraduate Advertising Management majors with at least 86 credits. Admission applications must be made prior to the final semester as an Advertising Management undergraduate. Admission to the program requires a minimum undergraduate grade-point average of 3.50, a statement of goals for the master’s degree, Graduate Record Examination scores, at least two letters of recommendation from faculty in the Department of Advertising and Public Relations and an approved program of study for the master’s degree at the time of admission. Admission to the Linked Bachelor’s-Master’s Program allows the application of up to 9 credits toward the master’s program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or an external accredited institution. The number of approved credits, not to exceed 9, is applied toward the credit requirement of the master’s degree. No 400-level courses with a grade lower than 3.0 will count toward the master’s degree. Credit obtained from 400-level pass-fail courses and internships will not count toward the degree. Credits applied to the Linked Bachelor’s-Master’s Program are not eligible to be applied to any other graduate degree program.

Effective Summer 2017.

6. Establish a **Linked Bachelor of Science Degree in Advertising Management** and **Master of Arts Degree in Public Relations** in the Department of Advertising and Public Relations. The University Committee on Undergraduate Education (UCUE) approved this request at its October 5, 2017 meeting. The University Committee on Graduate Studies (UCGS) approved this request at its October 9, 2017 meeting.

Per University policy:

A candidate for a Linked Bachelor's-Master's Degree from Michigan State University may request the application of up to 9 credits toward the master's program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or another postsecondary accredited institution of comparable academic quality. The number of approved credits, not to exceed 9, are applied toward the credit requirement of the master's degree. Some colleges with programs that require more than 30 credits for the master's degree may apply more than 9 credits toward the master's degree but not more than 30% of the total number of credits required for the master's degree. Credits applied to the Linked Bachelor's-Master's Program are not eligible to be applied to any other graduate degree program.
a. Add the following statement in the Department of Advertising and Public Relations:

**LINKED BACHELOR'S-MASTER'S DEGREE IN PUBLIC RELATIONS**
*Bachelor of Science Degree in Advertising Management*
*Master of Arts Degree in Public Relations*

The department welcomes applications from Michigan State University undergraduate Advertising Management majors with at least 86 credits. Admission applications must be made prior to the final semester as an Advertising Management undergraduate. Admission to the program requires a minimum undergraduate grade-point average of 3.50, a statement of goals for the master’s degree, Graduate Record Examination scores, at least two letters of recommendation from faculty in the Department of Advertising and Public Relations and an approved program of study for the master’s degree at the time of admission. Admission to the Linked Bachelor’s-Master’s Program allows the application of up to 9 credits toward the master’s program for qualifying 400-level and above course work taken at the undergraduate level at Michigan State University or an external accredited institution. The number of approved credits, not to exceed 9, is applied toward the credit requirement of the master’s degree. No 400-level courses with a grade lower than 3.0 will count toward the master’s degree. Credit obtained from 400-level pass-fail courses and internships will not count toward the degree. Credits applied to the Linked Bachelor’s-Master’s Program are not eligible to be applied to any other graduate degree program.

Effective Summer 2017.

7. Change the requirements for the **Disciplinary Teaching Minor** in **Journalism** that is available for secondary teacher certification in the School of Journalism. The Teacher Education Council (TEC) approved this request at its October 2, 2017 meeting.

a. Under the heading **Journalism** replace the entire entry with the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN 200</td>
<td>Writing and Reporting News</td>
<td>3</td>
</tr>
<tr>
<td>JRN 203</td>
<td>Visual Storytelling</td>
<td>3</td>
</tr>
<tr>
<td>JRN 310</td>
<td>Photojournalism</td>
<td>3</td>
</tr>
<tr>
<td>JRN 336</td>
<td>Designing for Media</td>
<td>3</td>
</tr>
<tr>
<td>JRN 409</td>
<td>Advising Student Publications</td>
<td>3</td>
</tr>
<tr>
<td>JRN 430</td>
<td>News Media Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Electives approved by the School</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

Students are encouraged to choose electives from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRN 206</td>
<td>Video Storytelling with Cell Phones</td>
<td>3</td>
</tr>
<tr>
<td>JRN 305</td>
<td>Editing for Print and Digital</td>
<td>3</td>
</tr>
<tr>
<td>JRN 325</td>
<td>Journalism History</td>
<td>3</td>
</tr>
</tbody>
</table>

Effective Spring 2018.

**COLLEGE OF EDUCATION**

1. Delete the curriculum and degree requirements for the **Master of Arts** degree in **Health Professions Education** in the College of Education. The University Committee on Graduate Studies (UCGS) provided consultative commentary to the Provost after considering this request at their September 11, 2017 meeting. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Graduate Studies.

No new students are to be admitted to the program effective Spring 2015. No students are to be readmitted to the program effective Spring 2015. Effective Spring 2020, coding for the program will be discontinued and the program will no longer be available in the College of Education. Students who have not met the requirements for the Master of Arts Degree in Health Professions Education through the College of Education prior to Spring 2020 will have to change their major.
2. Establish a **Graduate Certificate in Children’s and Young Adult Literature** in the Department of Teacher Education. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its September 11, 2017 meeting.

a. **Background Information:**

This proposed Graduate Certificate in Children’s and Young Adult Literature was precipitated by concerns from faculty and currently-enrolled Master of Arts in Teaching and Curriculum (MATC) students that there is no transcriptable record of their series of three selected rigorous courses focused on children’s and young adult literature. The series of courses have been developed across ten years and represents some of the strongest and highly rated in the department. Moreover, the current course concentration in children’s and young adult literature is one of the most popular in the Master of Arts in Teaching and Curriculum. Because issues related to reading, understanding and teaching children’s and young adult literature translate to possibilities for teachers to be more inclusive and critical of the texts they share with children, this Certificate would have appeal for not only practicing teachers, but also districts who are committed to hiring teachers committed to issues of social justice. Michigan State University already has the capacity and curricular structure to offer this graduate certificate program, including faculty and course work already housed in the Department of Teacher Education. The menu of courses already exist as a concentration choice for MATC students.

b. **Academic Programs Catalog Text:**

The Graduate Certificate in Children’s and Young Adult Literature is designed to provide in-service elementary and secondary teachers with materials and methods for teaching international children’s and young adult literature. The focus of the program is on multimodal texts, exploration of the kinds of conversations that surround pieces of literature, and whether those texts are written for children, adults, or both. The program aids understanding classics and awards winners in children’s and young adult literature by and about people and communities who have been and continue to be marginalized by and underrepresented in the school curriculum in the United States. The graduate certificate is available only online.

**Admission**

Students who wish to complete the graduate certificate and are currently enrolled in a graduate degree program at Michigan State University must complete the Intent to Enroll form on the program Web site.

**Requirements for the Graduate Certificate in Children’s and Young Adult Literature**

Students must complete 9 credits from the following courses:

<table>
<thead>
<tr>
<th>CREDITS</th>
<th>1. The following courses (3 credits):</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>TE 849</strong> Methods and Materials for Teaching Children’s and Adolescent Literature</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CREDITS</th>
<th>2. Two of the following courses (6 credits):</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>TE 836</strong> Awards and Classics of Children’s Literature</td>
</tr>
<tr>
<td>3</td>
<td><strong>TE 838</strong> Children’s Literature and Film</td>
</tr>
<tr>
<td>3</td>
<td><strong>TE 850</strong> Critical Reading for Children and Adolescents</td>
</tr>
<tr>
<td>1 to 4</td>
<td><strong>TE 883</strong> Seminars in Literacy Instruction</td>
</tr>
<tr>
<td>1 to 4</td>
<td><strong>TE 891</strong> Special Topics in Teaching, Curriculum, and Schooling</td>
</tr>
</tbody>
</table>

A children’s or young adult literature course outside the department, as approved by the student’s academic advisor.

Effective Summer 2018.
3. Establish a Graduate Certificate in Elementary STEM Education in the Department of Teacher Education. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its September 11, 2017 meeting.

a. Background Information:

Nationally, there is a growing interest in preparing elementary teachers to engage with each of the STEM disciplines (science, technology, engineering, and mathematics) individually and in integrated ways. The Master of Arts in Curriculum and Teaching program currently offers multiple courses in mathematics and science education and students in the program frequently take courses in the educational technology program. Offering this certificate would provide a way for students, primarily inservice teachers, to make this expertise in STEM education transcriptable, which would position them to take on roles as instructional leaders in their schools. A few universities offer similar programs nationally, such as Rider University and John Hopkins University. The University of Michigan -Dearborn offers an undergraduate K-8 STEM certificate. All of the other certificate programs are focused on face-to-face instruction, unlike MSU's, which will be online.

MSU has one of the largest faculties of mathematics and science education in the country, making it an ideal institution to offer such a certificate nationally. Given the proliferation of online master's programs for teachers, it is critical that MSU's nationally recognized teacher education program continue to provide high-quality professional development for teachers. This certificate could not only attract students to the program, but also provides a way for students enrolled in the program to record their STEM expertise on their transcripts in a way that can be recognized by school administrators.

b. Academic Programs Catalog Text:

The Graduate Certificate in Elementary STEM Education is designed to provide in-service elementary teachers with knowledge about student learning and engagement and instructional practices in STEM disciplines. The primary focus of the program is understanding inquiry-oriented practices across STEM disciplines. The graduate certificate is available only online.

Admission

Students who wish to complete the graduate certificate and are currently enrolled in a graduate degree program at Michigan State University must complete the Intent to Enroll form on the program Web site.

Requirements for the Graduate Certificate in Elementary STEM Education

Students must complete three courses from at least two of the categories below (9 credits):

<table>
<thead>
<tr>
<th>Category</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Education</td>
<td>TE 860</td>
<td>Practice and Inquiry in Science Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>TE 861A</td>
<td>Teaching Science for Understanding</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>TE 861B</td>
<td>Inquiry, Nature of Science, and Science Teaching</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>TE 861C</td>
<td>Action Research in K-12 Science Mathematics Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>Technology Education</td>
<td>CEP 810</td>
<td>Teaching for Understanding with Technology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CEP 811</td>
<td>Adapting Innovative Technologies to Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CEP 812</td>
<td>Applying Educational Technology to Issues of Practices</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>TE 831</td>
<td>Teaching School Subject Matter with Technology</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>TE 809</td>
<td>Inquiry-Oriented Instructional Strategies for the Elementary Classroom</td>
<td>3</td>
</tr>
</tbody>
</table>
Mathematics Education
CEP  805  Learning Mathematics with Technology  3
TE  855  Teaching School Mathematics  3
TE  857  Teaching and Learning Mathematical Problem Solving  3

Special Topics
TE  891  Special Topics in Teaching, Curriculum, and Schooling  1 to 4

Effective Summer 2018.

COLLEGE OF MUSIC

1. Establish a Doctor of Musical Arts in Collaborative Piano in the College of Music. The University Committee on Graduate Studies (UCGS) recommended approval of this request at its September 11, 2017 meeting.

   a. Background Information:

   Collaborative piano degrees prepare pianists to make music in small groups. Although sometimes referred to, as “accompanying” degrees, recipients of these degrees must demonstrate strong performance ability as pianists in addition to understanding the nuances of playing with various instrumentalists and vocalists. Most major schools of music that offer doctoral programs include a doctorate in collaborative piano.

   About 10 years ago, MSU instituted a master’s degree in collaborative piano. When the lead faculty instructor took a position at another institution, and was replaced by a fixed term faculty member, the program languished and few strong students were recruited. The fixed term faculty member was not renewed, and a new fixed term faculty member was hired and has breathed new life into the program, revised and strengthened the curriculum, and has been very successful in recruiting strong students into it.

   Because of the experience and expertise, ties to major conservatories in China and elsewhere in East Asia, it has been discovered that there is enormous interest in a Doctor of Musical Arts in Collaborative Piano here at MSU.

   In many ways, a person with a doctorate in collaborate piano is more marketable than one with a doctorate in piano performance. Skilled collaborative pianists are in high demand both here in the United States and in East Asia. We believe these students will be highly employable. Because the degree is structured like the Doctor of Musical Arts in Performance, and because the master’s degree in collaborative piano already exists, this degree can be added without adding faculty and without requiring additional resources.

   The accreditation of the College of Music was renewed until 2026 following a review during 2015-16.

   b. Academic Programs Catalog Text:

   In addition to meeting the requirements of the university and of the College of Music students must meet the requirements specified below.

   Admission

   To be admitted to the Doctor of Musical Arts degree program in collaborative piano on regular status, an applicant must have:

   1. a master's degree in music from a recognized educational institution or a total of 30 credits of approved graduate course work.

   2. presented a live performance audition acceptable to the committee appointed by the Dean of the College of Music.

   Applicants must present a live 40-minute audition, including 30 minutes of performance that demonstrates proficiency in solo performance and instrumental and vocal accompanying and approximately 10 minutes of discussion on one or more of the works, that is acceptable to the committee appointed by the Dean of the College of Music.
Applicants must also be prepared to respond to questions from the audition panel on the entire program.

With the approval of the faculty in the piano area, an applicant may be considered for admission to the program based on a high-quality recording of a recent performance, rather than based on a live performance audition. An applicant who submits a recording may be admitted only on provisional status pending the presentation of a live performance audition before a faculty committee appointed by the Dean of the College of Music. The audition must be presented before the end of the first semester of enrollment in the program.

**Guidance Committee**

The Associate Dean of Graduate Studies or his or her designee must be a member of the student's guidance committee and must serve as its chairperson. The Director of Collaborative Piano, a second faculty member from the piano area, one faculty member from the area of musicology, and one faculty member from the area of music theory must be members of the student's guidance committee. In instances where additional expertise would be beneficial, it is recommended that the guidance committee include a faculty member from within or outside the College of Music.

**Requirements for the Doctor of Musical Arts Degree in Collaborative Piano**

The student must meet the requirements specified below:

Each student in the program has a major professor who provides instruction in collaborative, oversees the musical content of the student's program, guides the preparation of required recitals, oversees the preparation of the scholarly paper, lecture-recital(s) and the final oral examination. Normally, the student studies with the major professor for six semesters.

The student must:

1. Complete the following courses (11 credits):
   - MUS 830 Research Methods and Materials in Music 3
   - MUS 840 Chamber Music Literature with Piano 2
   - MUS 841 Seminar in Advanced Collaborative Piano Techniques 4
   - MUS 842 Vocal Coaching Techniques 2

2. Complete at least 6 credits of 800- or 900-level courses in musicology and three courses in music theory, as specified by the student’s guidance committee.

3. Demonstrate proficiency in two languages by completing two of the following options:
   - a. FRN 101 Elementary French I 4
   - MUS 249 French Diction for Singers 1
   - b. GRM 101 Elementary German I 4
   - MUS 248 German Diction for Singers 1
   - c. ITL 101 Elementary Italian I 4
   - MUS 144 Italian Diction for Singers 1

   Courses completed at another university may be used to satisfy this requirement.

4. Pass the written comprehensive examinations in musicology and music theory. Students become eligible to take the comprehensive examination in either of these areas during the semester in which they are completing the required course work in that area.

5. Complete the following requirements in lieu of 24 credits of Music 999, a doctoral dissertation, and a final oral examination in defense of the dissertation:
   - a. Complete 24 credits of Music 996 Doctoral Recital Performance. These credits must include at least six semesters of collaborative piano, at least three semesters of applied piano and at least two semesters of collaborative performance of vocal repertoire. These requirements may be met concurrently.
   - b. Perform five public collaborative recitals that have been approved by a committee of faculty from the student's area, two of which must be presented within two consecutive semesters, excluding summers. Two
of the recitals must be instrumental recitals; two of the recitals must be vocal recitals. The fifth recital may be either an instrumental or vocal recital. A recording of each of the five recitals is required and must be submitted to the Office of the Associate Dean for Graduate Studies.

c. Complete one of the following three options:

(1) Present a lecture-recital twice, first to the student’s guidance committee as part of an oral examination and then to the public and submit a scholarly paper upon which the lecture-recital is based. In no case may the lecture-recital be presented publicly until it has been approved by the committee. The oral examination will be a defense of the lecture-recital and the paper. A recording of the lecture-recital is required and must be submitted to the Office of the Associate Dean for Graduate Studies.

(2) Present two lecture-recitals. Each lecture-recital must be presented twice, first to the student’s guidance committee as part of an oral examination and then to the public. In no case may the lecture-recital be presented publicly until it has been approved by the committee. Each oral examination will be a defense of one of the lecture-recitals. A recording of each lecture-recital is required and must be submitted to the Office of the Associate Dean for Graduate Studies.

(3) With the unanimous consent of the student’s guidance committee, submit a scholarly paper of major scope, comparable to a traditional dissertation, and take a final oral examination based on the paper.

A proposal for each lecture-recital and the scholarly paper, if applicable, must be approved in writing by all members of the guidance committee no less than three months before the oral examination on that lecture-recital may occur. A recording of the public lecture-recital(s) and the scholarly paper will be retained by the College as part of the permanent degree record.

In the case of (1) and (3) above, the student must have completed successfully all of the required course work (with the exception of Music 996 Doctoral Recital Performance), the comprehensive examination, the required public recitals, and the scholarly paper before the final oral examination may occur. In the case of (2) above, the student must have completed successfully all of the required course work (with the exception of Music 996), the comprehensive examination, and the required public recitals before either of the oral examinations may occur.

**Academic Standards**

Doctoral study presumes continuing excellence in course work, reading, and writing. A student may accumulate no more than 6 credits with a grade below 3.0 in courses that are to be counted toward the degree.

With regard to 4. (c) (1) above, the student’s performance on the lecture-recital and the related scholarly paper and the final oral examination based on the lecture-recital and the paper must be approved by the members of the student’s guidance committee with not more than one dissenting vote. Should the committee fail to accept the student’s performance on the lecture-recital and the related paper or the final oral examination, the student shall be allowed to repeat the performance of the lecture-recital or to revise the related paper or to repeat the final oral examination. The lecture-recital must be repeated or the paper revised or the oral examination repeated within one year, during a fall or spring semester.

With regard to 4. (c) (2) above, the student’s performance on each of the two lecture-recitals and the final oral examination based on each lecture-recital must be approved by the members of the student’s guidance committee with not more than one dissenting vote. Should the committee fail to accept the student’s performance on either lecture-recital or the final oral examination, the student shall be allowed to repeat the performance of the lecture-recital or to repeat the final oral examination. The lecture-recital must be repeated or the oral examination repeated within one year, during a fall or spring semester.
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

With regard to 4. (c) (3) above, the student’s performance on the scholarly paper and the final oral examination based on the paper must be approved by the members of the student’s guidance committee with not more than one dissenting vote. Should the committee fail to accept the student’s performance on the paper or the final oral examination, the student shall be allowed to revise the related paper or to repeat the final oral examination. The paper must be revised or the oral examination repeated within one year, during a fall or spring semester.

Effective Summer 2018.

COLLEGE OF NATURAL SCIENCE

1. Establish a Bachelor of Science degree in Medical Laboratory Science in the Biomedical Laboratory Diagnostics Program. The University Committee on Undergraduate Education (UCUE) recommended approval of this request at its September 21, 2017 meeting.

a. Background Information:

The proposed Bachelor of Science Medical Laboratory Science degree program is a revised and updated version of the Clinical Laboratory Science (CLS) degree program. The current CLS degree program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Upon completion of the CLS degree program, students are eligible to take the national Board of Certification exam by the American Society for Clinical Pathology (BOC ASCP). The degree name is being changed from Clinical Laboratory Science to Medical Laboratory Science because of the name change by the profession in 2009. In 2009, the Board of Registry and the National Credentialing Agency merged and one of the results of that merger was the designation for certified laboratory professionals. The new designation is Medical Laboratory Scientist (the older name is Medical Technologist (MT) and Clinical Laboratory Scientists (CLS)). With the updated curriculum, the name change was included to reflect the current professional designation for our graduates. The new MLS degree program will still follow the accreditation as outlined by NAACLS. The current CLS degree program will be placed in moratorium and discontinued.

According to the United States Bureau of Labor Statistics Occupational Outlook Handbook, the Medical Laboratory Science (MLS) profession is expected to grow by 16 percent between 2014 and 2024 (https://www.bls.gov/ooh/Healthcare/Medical-and-clinical-laboratory-technologists-and-technicians.htm accessed 7/26/2017). The NAACLS lists 223 MLS training programs nationwide with 12 of these located in Michigan. Of the 12 accredited programs in Michigan, MSU is one of eight University based-programs. The MLS major will help Michigan to meet the growing demand for medical laboratory scientists. When last analyzed, MSU graduates contributed approximately 75% of the new medical laboratory scientists added to the workforce each year in Michigan.

The Biomedical Laboratory Diagnostics Program was founded at MSU in 1926 to prepare students to become Medical Technologists, now known professionally as Medical Laboratory Scientists (MLS). Medical laboratory science is a career for persons with an interest in the application of the basic sciences to the clinical diagnosis of human disease. The scope of practice of MLS relies heavily on chemistry, biochemistry, mathematics, statistics, cell biology, genetics, physiology, microbiology and physics. Specific professional course work founded in these sciences then focuses on all of the major clinical disciplines including hematology, molecular diagnostics, immunology, immunohematology, hemostasis, clinical microbiology, and clinical chemistry. In addition, students take courses in laboratory management, laboratory quality assurance, healthcare ethics, and professional behaviors. Each course is designed to prepare students for their roles as laboratorians.

The faculty in the unit have provided the preparatory course work in the area of medical laboratory sciences. All of the faculty are certified MLS or MLT and have experience in the
clinical laboratory. This unit is the only unit on campus whose faculty possess the expertise to offer this curricular option.

b. Academic Programs Catalog Text:

The medical laboratory science major is designed to prepare students for certification in medical laboratory science. The program includes courses in the biomedical laboratory sciences, communications, mathematics and statistics, and medical laboratory sciences coupled with clinical practicum experiences. It is designed to prepare graduates for certification and immediate employment in medical laboratories upon graduation by including a six-month hospital laboratory experience.

The Bachelor of Science degree program in medical laboratory science has been accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 5600 N. River Road, Suite 720, Rosemont, Illinois 60018; phone (773) 714-8880.

Admission

Enrollment in the medical laboratory science major is limited. A new cohort is admitted at the end of the spring semester of the junior year. Applications for admission are due by the end of fall semester of the junior year. Applicant interviews are conducted during the spring semester of junior year. Admission decisions for students admitted to the medical laboratory science major are made following review of final grades from spring semester of junior year. Students are admitted as Biomedical Laboratory Science major until the application process for Medical Laboratory Science is completed.

To be considered for admission, the applicant must meet the following minimum criteria, in addition to the College of Natural Science admission requirements:

1. Have an overall grade-point average of 2.50 or better including courses taken at other institutions.
2. Have a grade-point average of 2.50 or better in the following courses: BLD 204, BLD 213L, BLD 313, and BLD 314L.
3. Have completed BMB 401, MMG 201 or MMG 301, BLD 324, and BLD 434.

Students who present other exceptional credentials, but do not meet the grade-point criterion noted above, may be considered for admission on a provisional basis. Applications for admission to the medical laboratory science major are reviewed by a committee of faculty. Factors considered by the Admission Committee in the applicant’s review and admission action are: (1) academic record including grade-point averages in science and non-science courses; (2) grades for selected preclinical courses; (3) laboratory science exposure; (4) interview; and (5) compositions. Students who are admitted provisionally and requirement additional course work to remedy deficiencies may not count this course work towards the fulfillment of degree requirements.

Requirements for the Bachelor of Science Degree in Medical Laboratory Science

1. A minimum of 134 credits is required for the Bachelor of Science degree in Medical Laboratory Science.
2. The University requirements for bachelor's degrees as described in the Undergraduate Education section of this catalog.

The University's Tier II writing requirement for the Medical Laboratory Science major is met by completing Biomedical Laboratory Science 456. That course is referenced in item 4. b. below.

Students who are enrolled in the College of Natural Science may complete the alternative track to Integrative Studies in Biological and Physical Sciences that is described in item 1. under the heading Graduation Requirements in the College statement. Certain courses referenced in requirement 4. below may be used to satisfy the alternative track.
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

3. The requirements of the College of Natural Science for the Bachelor of Science degree. The credits earned in certain courses referenced in requirement 4. below may be counted toward College requirements as appropriate.

4. The following requirements for the major:

a. Courses outside Biomedical Laboratory Diagnostics (52 to 59 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS 161</td>
<td>Cell and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BS 171</td>
<td>Cell and Molecular Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CEM 141</td>
<td>General Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CEM 161</td>
<td>Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CEM 162</td>
<td>Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CEM 251</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CEM 252</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CEM 333</td>
<td>Instrumental Methods and Applications</td>
<td>3</td>
</tr>
<tr>
<td>MMG 365</td>
<td>Medical Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MMG 365L</td>
<td>Medical Microbiology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MMG 465</td>
<td>Advanced Medical Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MMG 465L</td>
<td>Advanced Medical Microbiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>PHY 231</td>
<td>Introductory Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHY 232</td>
<td>Introductory Physics II</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) One of the following courses (3 credits):

- MTH 124 Survey of Calculus I 3
- MTH 132 Calculus I 3

(3) One of the following courses (3 or 4 credits):

- STT 200 Statistical Methods 3
- STT 201 Statistical Methods 4
- STT 231 Statistics for Scientists 3
- STT 351 Probability and Statistics for Engineering 3
- STT 421 Statistics I 3

(4) One of the following, either (a) or (b) (4 or 6 credits):

(a) BMB 401 Comprehensive Biochemistry 4
(b) BMB 461 Advanced Biochemistry I 3

(5) One of the following, either (a) or (b) (4 or 8 credits):

(a) PSL 310 Physiology for Pre-Health Professionals 4
(b) PSL 431 Human Physiology I 4

(6) One of the following courses (3 credits):

- MMG 201 Fundamentals of Microbiology 3
- MMG 301 Introductory Microbiology 3

b. All of the following Biomedical Laboratory Diagnostics courses (47 credits):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLD 121</td>
<td>Survive and Thrive Freshman Seminar</td>
<td>1</td>
</tr>
<tr>
<td>BLD 204</td>
<td>Mechanisms of Disease</td>
<td>3</td>
</tr>
<tr>
<td>BLD 213L</td>
<td>Clinical Laboratory Methods</td>
<td>2</td>
</tr>
<tr>
<td>BLD 302</td>
<td>Clinical Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>BLD 313</td>
<td>Quality in Clinical Laboratory Practice</td>
<td>3</td>
</tr>
<tr>
<td>BLD 314L</td>
<td>Advanced Clinical Laboratory Methods</td>
<td>1</td>
</tr>
<tr>
<td>BLD 324</td>
<td>Hematology and Hemostasis</td>
<td>3</td>
</tr>
<tr>
<td>BLD 402</td>
<td>Advanced Clinical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>BLD 424</td>
<td>Advanced Hematology and Hemostasis</td>
<td>2</td>
</tr>
<tr>
<td>BLD 424L</td>
<td>Advanced Hematology, Hemostasis and Urinalysis Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BLD 430</td>
<td>Molecular Diagnostics</td>
<td>2</td>
</tr>
<tr>
<td>BLD 434</td>
<td>Clinical Immunology</td>
<td>3</td>
</tr>
<tr>
<td>BLD 435</td>
<td>Immunohematology</td>
<td>2</td>
</tr>
<tr>
<td>BLD 435L</td>
<td>Immunohematology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BLD 445</td>
<td>Medical Laboratory Management</td>
<td>1</td>
</tr>
<tr>
<td>BLD 456</td>
<td>Medical Laboratory Professionalism (W)</td>
<td>2</td>
</tr>
<tr>
<td>BLD 471L</td>
<td>Advanced Clinical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BLD 473L</td>
<td>Advanced Clinical Hematology and Body</td>
<td>3</td>
</tr>
</tbody>
</table>
Report of the UCC to the Faculty Senate - 21  January 16, 2018

PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

Fluids Laboratory 3
BLD 475L Advanced Clinical Immunology and Immunohematology Laboratory 2
BLD 477L Advanced Clinical Microbiology Laboratory 3
BLD 479 Professional Behavior in Medical Laboratory Science 1
BLD 480 Medical Laboratory Science Examinations I 1
BLD 481 Medical Laboratory Science Examinations II 1

During the clinical practicum, usually two semesters, the student may be required to relocate and/or commute to a clinical laboratory in an affiliated clinical facility.

Academic Standards

To progress to the clinical phase of the curriculum, students must earn a grade-point average of 2.50 or higher in MMG 465, MMG 465L, BLD 402, BLD 430, BLD 435, and BLD 435L. Students who do not meet this progression standard will be dismissed from the medical laboratory science degree and can graduate with a biomedical laboratory science degree.

A specific statement of the policies for the clinical phase is provided in the Student Policies for Medical Laboratory Science Students. These policies are provided to all students upon acceptance to the major, but may be obtained earlier from the Biomedical Laboratory Diagnostics Program, 354 Farm Lane, Room N322, East Lansing, MI 48824. Admitted students are responsible for knowing and adhering to these program policies.

Effective Fall 2018.

2. Change the requirements for the Bachelor of Science degree in Biomedical Laboratory Science in the Biomedical Laboratory Diagnostics Program.

The concentrations in the Bachelor of Science degree in Biomedical Laboratory Science will be noted on the student’s academic record when the requirements for the degree have been completed.

a. Under the heading Requirements for the Bachelor of Science Degree in Biomedical Laboratory Science make the following changes:

(1) In item 1., paragraph two, replace ‘BLD 455’ with ‘BLD 456’.
(2) In item 3. a. change the total credits from ‘43 to 46’ to ‘44 to 51’.
(3) In item 3. a. (1) delete the following course:

MMG 463 Medical Microbiology 3

Add the following courses:

MMG 365 Medical Microbiology 3
MMG 365L Medical Microbiology Laboratory 1

(4) Replace item 3. a. (5) with the following:

One of the following, either (a) or (b) (4 or 8 credits):
(a) PSL 310 Physiology for Pre-Health Professionals 4
(b) PSL 431 Human Physiology I 4
PSL 432 Human Physiology II 4

(5) Replace item 3. b. with the following:

All of the following Biomedical Laboratory Diagnostics courses (24 credits):
BLD 121 Survive and Thrive Freshman Seminar 1
BLD 204 Mechanisms of Disease 3
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

BLD 213L Clinical Laboratory Methods    2
BLD 302 Clinical Chemistry    2
BLD 313 Quality in Clinical Laboratory Practice    3
BLD 314L Advanced Clinical Laboratory Methods    1
BLD 324 Hematology and Hemostasis    3
BLD 430 Molecular Laboratory Diagnostics    2
BLD 434 Clinical Immunology    3
BLD 435 Immunohematology    2
BLD 456 Medical Laboratory Professionalism (W)    2

(6) Add the following item 3. c.:

One of the following concentrations or minor:

Clinical Chemistry (12 or 13 credits)
(1) All of the following courses (7 credits):
BLD 402 Advanced Clinical Chemistry    4
CEM 333 Instrumental Methods and Applications    3
(2) Two of the following courses (5 or 6 credits):
BE 230 Engineering Analysis of Biological Systems    3
CEM 255 Organic Chemistry Laboratory    2
CEM 262 Quantitative Analysis    3
CEM 311 Inorganic Chemistry    3
CEM 383 Introductory Physical Chemistry I    3
PHM 350 Introductory Human Pharmacology    3
PHM 421 Clinical Toxicology    3
PHM 430 Human Pharmacology    3
PHM 450 Introduction to Chemical Toxicology    3

Immunology (10 or 11 credits)
(1) Both of the following courses (2 credits):
BLD 435L Immunohematology Laboratory    1
BLD 452L Immunodiagnostics Laboratory    1
(2) Two of the following courses (2 credits):
BLD 439 Histocompatibility and Immunogenetics    1
BLD 446 Immunobiology of Neoplasia    1
BLD 447 Immunomodulation and Immunotherapy    1
(3) One of the following courses (3 credits):
MMG 409 Eukaryotic Cell Biology    3
MMG 461 Molecular Pathogenesis    3
(4) One of the following courses (3 or 4 credits):
EPI 390 Disease in Society: Introduction to Epidemiology and Public Health    4
IBIO 341 Fundamental Genetics    4
MMG 465 Advanced Medical Microbiology    3
MMG 431 Microbial Genetics    3

Medical Microbiology (10 to 12 credits)
(1) All of the following courses (8 credits):
MMG 465 Advanced Medical Microbiology    3
MMG 465L Advanced Medical Microbiology Laboratory    2
MMG 461 Molecular Pathogenesis    3
(2) One of the following courses (2 to 4 credits):
BE 230 Engineering Analysis of Biological Systems    3
BLD 366 Infectious Diseases of East Africa    4
BLD 861 Emerging Infections, Emerging Technology    2
EPI 290 History of Scientific Reasoning and Critical Thinking in Global Public Health and Epidemiology    3
EPI 390 Disease in Society: Introduction to Epidemiology and Public Health    4
HM 801 Introduction to Public Health    3
IBIO 316 General Parasitology    3
MMG 413 Virology    3
MMG 421 Prokaryotic Cell Physiology    3
MMG 431 Microbial Genetics    3
Hematology and Hemostasis  (9 to 11 credits)
(1) All of the following courses (5 credits):
   BLD 424 Advanced Hematology and Hemostasis  2
   BLD 424L Advanced Hematology, Hemostasis and
       Urinalysis Laboratory  1
   BLD 435L Immunohematology Laboratory  1
   BLD 452L Immunodiagnostics Laboratory  1
(2) Two of the following courses (2 credits):
   BLD 439 Histocompatibility and Immunogenetics  1
   BLD 446 Immunobiology of Neoplasia  1
   BLD 447 Immunomodulation and Immunotherapy  1
(3) One of the following courses (2 to 4 credits):
   BLD 815 Cell Biology in Health and Disease I  2
   BLD 835 Hemostasis, Thrombosis and Effective
       Resource Management  3
   IBIO 408 Histology  4
   IBIO 425 Cells and Development (W)  4
   IBIO 450 Cancer Biology (W)  3
   MMG 409 Eukaryotic Cell Biology  3
   PHM 350 Introductory Human Pharmacology  3

Medical Laboratory Science  (13 credits)
All of the following courses:
   BLD 402 Advanced Clinical Chemistry  4
   BLD 424 Advanced Hematology and Hemostasis  2
   BLD 424L Advanced Hematology, Hemostasis and
       Urinalysis Laboratory  1
   BLD 435L Immunohematology Laboratory  1
   MMG 465 Advanced Medical Microbiology  3
   MMG 465L Advanced Medical Microbiology Laboratory  2

Molecular Diagnostics  (10 credits)
(1) All of the following courses (7 credits):
   BLD 430L Molecular Diagnostics Laboratory  1
   BLD 460 Advanced Molecular Diagnostics  2
   CMSE 201 Introduction to Computational Modeling  4
(2) One of the following courses (3 credits):
   MMG 409 Eukaryotic Cell Biology  3
   MMG 431 Microbial Genetics  3
   MMG 433 Microbial Genomics  3

Minor in Information Technology  (19 credits)
Students must apply to the Minor in Information Technology through the Eli
Broad College of Business. Students interested in pursuing the minor must
consult with the Biomedical Laboratory Diagnostics advisor prior to completion of
the application.

Effective Fall 2018.
Establish a **Dual Major** in **Environmental Science and Policy** in the College of Social Science. The University Committee on Graduate Studies (UCGS) approved this request at its October 9, 2017 meeting.

### Background Information:

The doctoral Specialization in Environmental Science and Policy (ESP) was launched in 2004 by the Environmental Science and Policy Program (ESPP) to provide students with an understanding of how diverse disciplines conceptualize environmental issues and how scientific information can be brought to bear on environmental decision-making and environmental policy. Enrollment in the specialization has steadily increased and currently there are about 50 students in the program. The students come from over 20 departments in six colleges (College of Agriculture and Natural Resources, College of Engineering, College of Natural Science, College of Social Science, College of Arts and Letters, and College of Communication Arts and Science). Students have received prestigious awards such as NSF Fellowships, Science publication awards, American Fisheries Society Award, USAID Fellowship, Brent K. Marshall Award for Outstanding Graduate Student (Society for the Study of Social Problems), Paul W. Rodgers Scholarship (International Association for the Great Lakes Research), as well as numerous MSU graduate student awards. Graduates from the Specialization have consistently been placed in R1 universities as faculty members.

ESPP proposes to expand the specialization to a dual major, in partnership with a range of departments and schools, including those whose students have taken the specialization in the past and those with joint faculty appointments in ESPP. The dual major will include an enhanced policy relevant research component, impose minimum grade requirements, and make the capstone experience more visible and better connected with policy.

The dual major will complement the many environment related Ph.D. degrees offered at MSU. There are no graduate degrees offered in environmental science and policy at MSU, and yet there is strong societal demand for scientists who understand policy issues and who can contribute to science based policymaking. These considerations motivated the offering of the doctoral specialization in ESP initially. When the MSU community was engaged in discussing the establishment of ESPP, the intention was to eventually offer an interdisciplinary degree program in environmental science and policy. Early on, ESPP opted for a specialization rather than a degree program partly to gain experience in offering interdisciplinary graduate education. We have accumulated sufficient knowledge and experience over the past 13 years to expand the specialization to a dual major.

Graduates with the dual major will be extremely competitive in the job market because the linkage of environmental science and policy and interdisciplinary scholarship will strongly complement the solid disciplinary training the students obtain in their home departments. The marketability of the credential is enhanced by the shift to the dual major because almost all public and private institutions understand what a dual major entails while the nature of a specialization is defined relatively poorly and often requires interpretation.

The dual major credential more appropriately reflects the training ESPP graduates receive. The students will take four 3-credit courses; organize and present in a research colloquium; demonstrate policy relevant research in dissertation chapters, peer reviewed publications, or white papers; and attend a number of community-building activities with other students from different disciplines. The dual major will enable our graduates to showcase the formal training in environmental science and policy when they enter the job market whereas the current designation by the doctoral specialization does not carry the same professional stature that is warranted by the extensive training the students receive.

The expansion to a dual major is strongly supported by ESPP’s current students and our affiliated faculty members as witnessed by the feedback received through numerous surveys and town hall meetings held over the past two years.
PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

b. Academic Programs Catalog Text:

The interdepartmental dual major in environmental science and policy is administered by the College of Social Science. The dual major is available only to those students who plan to complete a Ph.D. degree program that involves environmental science and policy and who have a graduate major at Michigan State University. The student does not have the option of completing a dual major in environmental science and policy alone.

The educational objectives of the interdepartmental program are to:

- develop interdisciplinary knowledge and skills across natural and social science disciplines related to the environment and to enable collaboration with researchers and practitioners from other disciplines towards addressing environmental challenges.
- gain knowledge of and experience with science based environmental policies, including how scientific knowledge can contribute to practical policies and how interdisciplinary collaboration can improve the effectiveness of policies.
- gain practical experience in communicating scientific research to multiple audiences, including scientific communities and the general public.

In addition to meeting the requirements of the University and of the College of Social Science, students must meet the requirements specified below.

Admission

In order to enroll in the dual major in environmental science and policy a student must also have been admitted to a major at Michigan State University.

The Graduate Program Council, composed of members of the faculty from participating departments will review applications for admission and recommend acceptance of applicants for admission. In special cases, an applicant who has deficiencies in background courses may be admitted to the dual major on a provisional basis.

Guidance Committee

The program shall be planned in accordance with the statement on Dual Major Doctoral Degrees in the Graduate Education section of this catalog. At least one member of the student's doctoral dissertation committee shall be an environmental science and policy affiliated faculty member.

Students in the dual major in environmental science and policy are expected to attend a number of community-building activities with other students from different disciplines.

Requirements for the Dual Major in Environmental Science and Policy

1. All of the following courses with a minimum grade-point average of 3.0 with no more than one course’s grade below 3.0 in courses used in fulfillment of the requirements for the dual major (12 credits):
   - ESP 800 Principles of Environmental Science and Policy  3
   - ESP 801 Physical, Chemical and Biological Processes of the Environment  3
   - ESP 804 Environmental Applications and Analysis  3
   - Approved course substitutions for ESP 801, 802, and 804 may be made by consulting the list of approved substitutes at [www.espp.msu.edu/specialization/index.php](http://www.espp.msu.edu/specialization/index.php).

2. Twenty-four credits in Doctoral Dissertation Research (course number 999) from the student's departmental major.

3. Pass a comprehensive examination that will be defined by the requirements of the student's major department and that will include a written examination in which the student demonstrates a knowledge of environmental science and policy as determined by the guidance committee.
4. Submit a dissertation that, in the judgment of the student’s guidance committee, represents the integration of environmental science and policy and the student’s departmental major.

Effective Fall 2018.
PART II - NEW COURSES

DEPARTMENT OF ANIMAL SCIENCE

ANS 140A  Fundamentals of Young-Horse Training
Fall of every year. 2(0-4) RB: ANS 140 R: Open to students in the College of Agriculture and Natural Resources or in the Institute of Agricultural Technology or in the Department of Animal Science or in the Applied Horse Science Major or in the Horse Management Major.
Demonstration and practice of safely working with and training weanlings, yearlings and two-year-old horses. Halter training and longeing techniques of clippers and bathing. Discussion of application of learning theory. Assist with young horse husbandry procedures.
Effective Spring 2018

BIOMEDICAL LABORATORY DIAGNOSTICS PROGRAM

BLD 121  Survive and Thrive Freshman Seminar
Fall of every year. Spring of every year. 1(1-0) R: Open to freshmen or sophomores in the Biomedical Laboratory Science Major or in the Lyman Briggs Biomedical Laboratory Science Coordinate Major or approval of department.
Academic skills and communication skills with an emphasis on scientific communication, professional behavior. History of the medical and the medical laboratory professions, and campus resources for a successful college experience.
Effective Fall 2018

BLD 302  Clinical Chemistry
Spring of every year. 2(2-0) P: BLD 204 and BLD 313
Correlation of common medical laboratory testing and associated disease states, including comprehensive metabolic panel, lipid panel, thyroid panel, urinalysis and drugs of abuse screening.
Effective Spring 2018

BLD 313  Quality in Clinical Laboratory Practice
Fall of every year. Spring of every year. 3(3-0) P: (BLD 213L) and ((STT 201 or STT 200 or STT 231) and completion of Tier I writing requirement) RB: PHY 232
Concepts and principles of clinical laboratory analysis and the statistical evaluation of the data produced as related to quality.
SA: BLD 414, BLD 417
Effective Fall 2018

BLD 314L  Advanced Clinical Laboratory Methods
Fall of every year. Spring of every year. 1(0-3) P: BLD 213L RB: BLD 204 and BLD 324 R: Open to students in the Biomedical Laboratory Science Major or in the Lyman Briggs Biomedical Laboratory Science Coordinate Major.
Diagnostics assays across various disciplines within the clinical laboratory including hematology, immunohematology, coagulation, urinalysis, and molecular diagnostics. Data interpretations and problem solving skills.
Effective Fall 2018

BLD 366  Infectious Diseases of East Africa
Summer of every year. Africa, Africa, Africa 4(1-6) P: (BLD 213) or BLD 214L or (CEM 162 and BS 171) or (LB 145 and LB 172L) RB: Pre-health professional undergraduate students with junior or senior status. R: Approval of department.
Biology and laboratory diagnosis of the most common infectious disease of the region. Health disparities and healthcare system organization.
Effective Summer 2017
PART II – NEW COURSES

BLD 402  Advanced Clinical Chemistry  
Spring of every year. 4(4-0) P: (BLD 302 and BMB 401) or (BLD 302 and BMB 461 and BMB 462)  
Differences in clinical laboratory testing results between normal and diseased populations.  
Metabolic and endocrine systems, acquired and inherited diseases, therapeutic drug monitoring and toxicology.  
Effective Spring 2017

BLD 430L  Molecular Diagnostics Laboratory  
Fall of every year. 1(0-3) P: BLD 430 R: Open to undergraduate students in the Biomedical Laboratory Diagnostics Program or approval of department.  
Molecular technologies with emphasis on clinical and diagnostic applications.  
Effective Fall 2018

BLD 443  Introduction to Laboratory Information Systems  
Spring of every year. 3(3-0) P: (CSE 201 or CSE 231) and (MTH 124 or MTH 132) and BLD 213L  
R: Open to students in the Information Technology Minor.  
Purpose and function of information systems components used in medical laboratories.  
Practical applications of system selection, validation, maintenance, problem resolution and report generation.  
Effective Fall 2017

BLD 444  Laboratory Information Technology Practicum and Project Management  
Summer of every year. 3(0-40) P: BLD 443 and ITM 311 RB: Biomedical Laboratory Science major.  
R: Open to students in the Information Technology Minor. Approval of department.  
Gain experience in using, maintaining and managing quality of a laboratory information system at a clinical or public health laboratory site. Project management principles and application.  
Effective Spring 2018

BLD 445  Medical Laboratory Management  
Fall of every year. 1(1-0) P: BLD 442W or concurrently R: Open to students in the Biomedical Laboratory Diagnostics Program. Approval of department.  
Management of clinical laboratories through adherence to laws and regulations, developing financial and budgeting tools, and assuring a competent workforce.  
Effective Fall 2018

BLD 446  Immunobiology of Neoplasia  
Spring of every year. 1(1-0) P: BLD 434 or MMG 451 RB: BLD 204 and BLD 435 R: Open to juniors or seniors in the College of Natural Science or in the Lyman Briggs College.  
The biology of neoplastic cells (cancers, leukemias, lymphomas), the immune response to neoplasias, and immunotherapy of cancer.  
Effective Spring 2018

BLD 447  Immunomodulation and Immunotherapy  
Spring of every year. 1(1-0) P: BLD 434 or MMG 451 RB: BLD 204 and BLD 435 R: Open to juniors or seniors in the College of Natural Science or in the Lyman Briggs College.  
Current applications of Immunology understanding in the immunomodulation and immunotherapy of infectious disease, immunodeficiencies, autoimmune disease, and cancers.  
Effective Spring 2018

BLD 452L  Immunodiagnosics Laboratory  
Spring of every year. 1(0-3) P: BLD 314L and BLD 434 R: Open to students in the Biomedical Laboratory Science Major or approval of department. Not open to students with credit in BLD 852.  
Performance of immunopurifications, in vitro diagnostic assays and basic flow cytometry.  
Data analysis and quality control evaluation.  
Effective Fall 2017
**PART II – NEW COURSES**

**BLD 456**  
Medical Laboratory Professionalism (W)  
Fall of every year. Spring of every year. 2(2-0) P: (BLD 121 and BLD 313) and completion of Tier I writing requirement RB: (BLD 302 and BLD 324 and BLD 435) and (MMG 201 or MMG 301) R: Open to seniors in the Biomedical Laboratory Diagnostics Program.  
Basic principles and concepts in education and professional behavior in clinical laboratories. Systematic approach to instructional design, delivery and evaluation.  
Principles of leadership.  
Effective Fall 2018

**BLD 460**  
Advanced Molecular Diagnostics  
Fall of every year. 2(2-0) P: BLD 430 R: Open to students in the Lyman Briggs College or in the College of Natural Science.  
Common and specialized molecular diagnostic technologies applied to medical diagnostics and related applications.  
Effective Fall 2018

**BLD 480**  
Medical Laboratory Science Examinations I  
Fall of every year. Summer of every year. 1 credit. P: BLD 435L and BLD 402 and BLD 424L and MMG 465L R: Open to students in the Biomedical Laboratory Diagnostics Program. Approval of department.  
Medical laboratory science profession entry-level body of knowledge in clinical chemistry, hematology, hemostasis, body fluid analysis, immunology, immunohematology, and clinical microbiology. Integration of cognitive material with clinical laboratory test results.  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
Effective Summer 2019

**BLD 481**  
Medical Laboratory Science Examinations II  
Fall of every year. Spring of every year. Summer of every year. 1 credit. P: BLD 435L and BLD 402 and BLD 424L and BLD 480 and MMG 465L R: Open to students in the Biomedical Laboratory Diagnostics Program. Approval of department.  
Continuation of BLD 480.  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
Effective Summer 2019

**BLD 854**  
Advanced Flow Cytometry Laboratory  
Summer of every year. 2(0-4) P: BLD 852 RB: Experience in Flow Cytometry R: Open to graduate students. C: BLD 853 concurrently.  
Flow cytometry and analyses exercises that emphasize controls, reagent titrations, assay validation, determination of assay sensitivity, and assay development using 6 to 8 fluorochromes.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
Effective Summer 2018

**THE ELI BROAD COLLEGE OF BUSINESS**

**HCM 801**  
Critical Thinking and Innovation in Healthcare  
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.  
Effective Fall 2018
HCM 802  Cost Analysis in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.

Cost accounting and management control tools and techniques for making value-added decisions in important healthcare contexts. Topics will include (a) Cost Analysis: cost estimation, cost allocation, and cost behavior; (b) Pricing: revenue management and strategic product-mix decisions; (c) Profitability: analytical techniques for determining profitability of departments, services, and patients; (d) Control: budgeting, variance analysis, coordination of activities among departments; and (e) Contracting with suppliers and insurance companies.
Effective Fall 2018

HCM 803  Financial Analysis in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.

Principles of financial accounting applied to healthcare organizations, emphasizing application of key financial accounting tools and concepts for managerial decisions.
Effective Fall 2018

HCM 804  Financial Management in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. P: HCM 803 R: Approval of college.

Financial management tools for investment and financing decision making in healthcare firms. Risk, valuation, capital budgeting. Analysis of the financial condition of the firm through the examination of financial statements. Current events and applications.
Effective Fall 2018

HCM 805  Quality, Risk, and Performance Management
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.

Managing healthcare performance by means of quality initiatives, process management, and risk management. Relevant methods, principles, processes, strategies and systems thinking.
Effective Fall 2018

HCM 806  Healthcare Information Systems
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.

Issues in the management and implementation of healthcare information systems and application of information technologies to support the effective and efficient delivery of healthcare work processes to stakeholders. The relationship between quality management and information management. Technology standards, security, and emerging technologies. Healthcare analytics.
Effective Fall 2018

HCM 807  Law and Ethics in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.

Legal and ethical doctrines, principles, applications, and issues in healthcare organizations. Legal and ethical dimensions of decision making, administrative law, and planning in healthcare.
Effective Fall 2018

HCM 808  Healthcare Systems and Economic Policy
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.

Organization of U.S. health system, policy process, and services. Dynamics of economic theory, valuation, financing and delivery of healthcare.
Effective Fall 2018
HCM 809  Organizational Behavior in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Role of workforce leadership in fulfilling the goals and mission of healthcare organizations. Theories and applications of organizational behavior principles to motivating, rewarding, and structuring employees' work. Managing groups and teams. Structuring the organization. Domestic and international issues in the workplace.
Effective Fall 2018

HCM 810  Human Resource Management in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Human resource management for healthcare organizations. Strategies for human resource recruitment, utilization, productivity, compensation, and development.
Effective Fall 2018

HCM 811  Healthcare Strategic Management
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Examines ways top managers create and sustain competitive advantage in today's challenging healthcare marketplace from a total firm perspective.
Effective Fall 2018

HCM 812  Supply Chain Management in Healthcare
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Concepts and tools of supply chain management related to healthcare settings. Management of resources, sourcing, operations, inventory, logistics, and capacity for effective services, quality, and cost performance.
Effective Fall 2018

HCM 813  Healthcare Services Marketing
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
The principles and processes of marketing and its role in effectively managing healthcare services for improvement and policy making.
Effective Fall 2018

HCM 814  Hospitality and the Patient Experience
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
The patient experience in healthcare as it relates to hospitality marketing, service quality management, patient well-being, and the role that leadership plays in the process.
Effective Fall 2018

HCM 815  Managerial Epidemiology and Population Health
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Epidemiological concepts for decision-making in healthcare organizations. Managerial strategies for applying population health principles to disease assessment, community forecasting, cost effectiveness, and utilization of services.
Effective Fall 2018

HCM 816  Healthcare Management Capstone
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. R: Approval of college.
Integrates the coursework, skills and perspectives in the program in a project, paper, or practicum. Brings cumulative knowledge to bear on specific healthcare management issues, dilemmas and gaps.
Effective Fall 2018
HCM 817  Healthcare Leadership
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. P: HCM 809 and HCM 810 R: Approval of college.
Review of leadership theories and practices as applied in healthcare organizations. Development of leadership skills.
Effective Fall 2018

HCM 818  Strategic Decision Making
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. P: HCM 811 R: Approval of college.
Explores the process of strategic decision-making in healthcare organizations. Identifies issues that impeded and improve decision success. Examines a range of contextual factors that influence the decision process.
Effective Fall 2018

HCM 819  Market Analysis and Planning
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Techniques, systems and formats to comprehend healthcare market forces and develop value-based healthcare marketing plans.
Effective Fall 2018

HCM 820  Negotiations
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. P: HCM 809 R: Approval of college.
Fundamentals of effective negotiations in healthcare organizations. Planning for negotiation, integrative and distributive negotiation strategies, power and influence, ethics and interpersonal communication. Experience in negotiating through simulations and follow-up discussions.
Effective Fall 2018

HCM 821  Healthcare Regulations
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Examines the role of regulations in the healthcare industry, focusing on standards of regulatory and accreditation organizations. Explores regulation in relationship to organizational culture and performance.
Effective Fall 2018

HCM 822  Healthcare Compliance
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Explores the importance of compliance in healthcare organizations. Effective healthcare compliance, governance issues, fiduciary responsibilities, and challenges faced in the healthcare industry.
Effective Fall 2018

HCM 823  Enterprise Risk Management
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Best approaches, academic and practical, to creating and implementing an Enterprise Risk Management (ERM) system. Examines ERM from a healthcare perspective. Key risk frameworks and tools for critical analysis of issues.
Effective Fall 2018

HCM 824  Implementing Compliance Systems
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. R: Approval of college.
Implementation, execution, and enforcement of healthcare compliance programs. Current issues in compliance systems and healthcare sectors, and relationships with the federal government and accrediting agencies.
Effective Fall 2018
**DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION**

CEP 809  Data-Driven Instruction within Multi-Tiered Systems of Support  
Fall of every year. 3(3-0) R: Open to graduate students in the College of Education or approval of department.  
Applying the multi-tiered systems of support framework directly to school settings.  
Integrating knowledge of instruction from other courses to make data-based decisions for students.  
Effective Fall 2018

**DEPARTMENT OF HORTICULTURE**

HRT 405  Sustainable Practices for Horticultural Food Crop Production  
Spring of every year. 1(1-0) P: HRT 203  
Effective Spring 2018

**DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES**

HDFS 962  Longitudinal Structural Equation Modeling  
Fall of every year. Spring of even years. 3(3-0)  
Application of structural equation modeling to the analysis of longitudinal data.  
Effective Spring 2018

**COLLEGE OF HUMAN MEDICINE**

HM 611  Hospice Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
Treatment and interdisciplinary team evaluation in hospice medicine. Advanced care directive processes and procedures.  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

HM 613  Complementary Medicine Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
Evidence based management of disease and symptoms with complementary and alternative medicine.  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018
PART II – NEW COURSES

HM 614  Student-Designed Elective Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Customized experience of clinical science skills and knowledge. Clinical performance evaluation.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

DEPARTMENT OF KINESIOLOGY

KIN 109  Specialized Sports and Physical Activities
Fall of every year. Spring of every year. Summer of every year. 1(0-2) R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in KIN 101-108 and KIN 111-118.
Specialized opportunities in sports and physical activities. Competence in special skills, rules, and cultural perspectives as related to various offered activities.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2018

DEPARTMENT OF LINGUISTICS AND GERMANIC, SLAVIC, ASIAN AND AFRICAN LANGUAGES

AFR 301A  Third Year Swahili I
Fall of every year. 3(3-0) P: AFR 202A
Development of listening, speaking, reading and writing skills beyond the intermediate level. Intensive work on authentic texts covering contemporary issues in East and Central Africa.
Effective Fall 2018

AFR 302A  Third Year Swahili II
Spring of every year. 3(3-0) P: AFR 301A
Development of listening, speaking, reading, and writing skills beyond the intermediate level. Intensive work on authentic texts covering contemporary issues in East and Central Africa.
Effective Fall 2018

DEPARTMENT OF MEDICINE

MED 619  Advanced Internal Medicine-Ambulatory
Fall of every year. Spring of every year. Summer of every year. 6(6-0) A student may earn a maximum of 24 credits in all enrollments for this course. P: MED 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical experiences to refine diagnostic and management skills of the complicated general internal medicine patient in the ambulatory setting.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018
PART II – NEW COURSES

MED 621  Advanced Internal Medicine-Inpatient
Fall of every year. Spring of every year. Summer of every year. 6(6-0) A student may earn a maximum of 24 credits in all enrollments for this course. P: MED 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical experiences to refine diagnostic and management skills of the complicated general internal medicine patient in the inpatient setting.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

MED 624  Geriatric Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical experiences to refine diagnostic and management skills in elderly internal medicine patients in the inpatient, outpatient or nursing facility setting.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS

MMG 365  Medical Microbiology
Spring of every year. 3(3-0) Interdepartmental with Biomedical Laboratory Diagnostics. P: (BS 161 and CEM 141) and (MMG 201 or MMG 301) Not open to students with credit in MMG 463.
Laboratory diagnosis, disease and epidemiology of the most common bacterial, viral, fungal and parasitic pathogens and concepts in infectious disease control, prevention and treatment.
Effective Spring 2018

MMG 365L  Medical Microbiology Laboratory
Spring of every year. 1(0-2) Interdepartmental with Biomedical Laboratory Diagnostics. P: (MMG 365 or concurrently) and (MMG 201 or MMG 301) Not open to students with credit in MMG 464.
Practical experience in safely and accurately performing standard clinical microbiology tests to diagnose disease-causing microbes.
Effective Spring 2018

MMG 465  Advanced Medical Microbiology
Fall of every year. 3(3-0) Interdepartmental with Biomedical Laboratory Diagnostics. P: MMG 365 Not open to students with credit in MMG 463.
Advanced laboratory diagnosis, epidemiology, and prevention of infectious diseases using an anatomical system specimen approach to study a comprehensive set of human pathogens and microbiota.
Effective Fall 2018

MMG 465L  Advanced Medical Microbiology Laboratory
Fall of every year. 2(0-6) Interdepartmental with Biomedical Laboratory Diagnostics. P: MMG 365L and (MMG 465 or concurrently) Not open to students with credit in MMG 464. C: MMG 465 concurrently.
Practical experience in safely and accurately performing standard clinical microbiology tests to process clinical specimens, identify pathogens and perform and interpret susceptibility testing.
Effective Fall 2018
PART II – NEW COURSES

COLLEGE OF MUSIC

MUS 436  Popular Music of Black America
Fall of even years. 2(2-0) P: MUS 211 or MUS 212 R: Open to juniors or seniors in the College of Music or approval of college.
REINSTATEMENT  Black popular music from 1945 to the present. Influence on American popular music. Rhythm and blues, soul, funk, disco, rap, and their derivative forms. Role of African-American performers, songwriters, and producers in the development of a multibillion-dollar music industry.
Effective Spring 2019

MUS 867  Practical Keyboard Musicianship
Summer of every year. 3(3-0) R: Open to graduate students in the College of Music.
Transposition, melody harmonization, realization and reduction of open scores, basic improvisation, and playing from various kinds of shorthands. Skills that facilitate musicianship in the classroom.
Effective Summer 2018

SCHOOL OF PACKAGING

PKG 421  Virtual Design and Prototyping
Spring of every year. 3(2-2) P: PKG 411
Using technology resources to design and integrate packaging structure and graphics. Use of design thinking for package development. Virtual and physical prototyping.
Emphasis on packaging for specialized markets.
Effective Spring 2018

PKG 456  Packaging and Shelf Life of Perishable Food
Fall of every year. 3(3-0) P: PKG 322 and PKG 323 R: Open to sophomores or juniors or seniors or graduate students in the School of Packaging or approval of department.
Chemical, physical and microbiological changes that affect quality of produce, meat, and seafood, and their relationship to packaging and distribution (cold chain). Packaging and preservation technologies to extend shelf life of perishable food.
Effective Fall 2018

PKG 499  Undergraduate Research
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to undergraduate students in the Packaging Major. Approval of school.
Undergraduate research project designed to enhance critical thinking, problem-solving, teamwork, and communication skills.
Effective Spring 2018

DEPARTMENT OF PEDIATRICS AND HUMAN DEVELOPMENT

PHD 610  Pediatric Allergy-Immunology Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 or PHD 600 R: Open to graduate-professional students in the College of Human Medicine.
Pathophysiology and evaluation of various atopic and immunologic disorders in pediatric patients.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018
PHD 611  Pediatric Critical Care Medicine Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical experience in pediatric critical care medicine including respiratory, acid/base, infectious disease etiologies.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

PHD 612  Pediatric Gastroenterology Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical experience in the outpatient and inpatient evaluation and management of pediatric gastrointestinal disease.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

PHD 613  Pediatric Emergency Medicine Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Assessment and management of pediatric patients in the emergency care setting.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

PHD 614  Pediatric Nephrology Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical experience in the outpatient and inpatient settings in assessment and management of children with renal disease.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

PHD 615  Pediatric Neurology Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Clinical care of children with neurological disease in inpatient and outpatient settings.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018
PART II – NEW COURSES

PHD 616  Pediatric Physical Medicine and Rehabilitation Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine. 
Clinical experience working with children with acute and chronic disabilities  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

PHD 617  Pediatric Adolescent Medicine Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine. 
Clinical experience and psychosocial dimensions of adolescent medical care in inpatient or outpatient settings.  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

PHD 618  Pediatrics Sub-Internship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine. 
 Clinical experience in which students take primary responsibility for managing the care of pediatric patients under the supervision of senior residents and/or attending physicians. 
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

PHD 619  Pediatric Hospital Medicine Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine. 
Clinical experience in pediatric medicine in the inpatient setting. Common and uncommon conditions. 
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

PHD 620  Child Abuse Pediatric Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine. 
Clinical assessment and care of children at risk for violence, abuse or neglect in outpatient or inpatient settings.  
Request the use of the Pass-No Grade (P-N) system.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018
PART II – NEW COURSES

PHD 621  Pediatric Rheumatology Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 or PHD 600 R: Open to graduate-professional students in the College of Human Medicine.
Pathophysiology and evaluation of pediatric rheumatology patients. Multidisciplinary care of children with chronic rheumatologic diseases.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

PHM 483  Antimicrobial Chemotherapy
Fall of every year. Spring of every year. 3(3-0) P: (PHM 350 or concurrently) and (PHM 461 or concurrently) RB: Biology, microbiology, or biochemistry. R: Approval of department.
Major human bacterial, viral, and fungal infections including disease characteristic, epidemiologic and clinical features, pathology, laboratory diagnosis, case reviews, and pharmacologic treatment including drug kinetics, dynamics, drug interactions and patient considerations.
Effective Fall 2018

PHM 805  Receptor Pharmacology
Fall of every year. 1(1-0) R: Not open to doctoral students in the Department of Pharmacology and Toxicology. Approval of department.
Fundamental principles and current theories of receptor pharmacology, drug receptor pharmacodynamics and signal transduction mechanisms.
Effective Fall 2018

DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

CSS 126  Introduction to Weed Management
Fall of every year. 2(2-0) P: CSS 101 or CSS 232 or HRT 109 R: Open to students in the Institute of Agricultural Technology.
Biology, identification, and management of weeds.
SA: CSS 156
Effective Fall 2018

CSS 226L  Weed Science Laboratory
Fall of every year. 1(0-2) P: ((CSS 126 or concurrently) or (CSS 326 or concurrently)) and (CSS 101 or CSS 232 or HRT 203 or HRT 109)
SA: CSS 156, CSS 302, CSS 402
Effective Fall 2018

CSS 313  Data Interpretation and Writing in the Agronomic Sciences
Spring of every year. 2(2-0) P: (CSS 110 and CSS 210) and (CSS 101 or CSS 232) R: Not open to freshmen.
Data analysis, interpretation, integration, and technical writing in agronomic sciences.
Effective Fall 2018

CSS 326  Weed Science
Fall of every year. 2(2-0) P: CSS 101 or CSS 232 or HRT 203 R: Not open to students in the Institute of Agricultural Technology.
Weed biology and ecology. Integrated weed management including cultural, mechanical, biological, and chemical control practices. Herbicide mode of action, selectivity in plants, environmental considerations.
SA: CSS 302, CSS 402
Effective Fall 2018
DEPARTMENT OF PLANT BIOLOGY

PLB 826 Tropical Biology: An Ecological Approach
Summer of every year. 8 credits. Interdepartmental with Integrative Biology R: Approval of department; application required.

REINSTATEMENT Principles of tropical ecology at the population, community, and ecosystem levels. Given at various sites in Costa Rica by the Organization for Tropical Studies.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment.
SA: BOT 826
Effective Fall 2017

DEPARTMENT OF SURGERY

SUR 622 Pediatric Orthopedic Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Evaluation and management strategies for common pediatric orthopedic maladies.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 623 Sports Medicine Orthopedic Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Evaluation and management strategies for common sports medicine maladies presenting to the orthopedic surgeon.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 624 Vascular Surgery Clerkship
Fall of every year. Spring of even years. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Evaluation, management and knowledge of vascular surgical conditions.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 625 Hand Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
Evaluation, management and knowledge of hand surgery conditions.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018
SUR 626  Pediatric Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
- Evaluation, management and knowledge of general pediatric surgical conditions.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 627  Burns Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
- Evaluation, management and knowledge of burns in trauma patients.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 628  Trauma Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
- Evaluation, management and knowledge of trauma in trauma patients.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 629  Colorectal Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
- Evaluation, management and knowledge of colorectal surgical conditions.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018

SUR 630  Surgical Wound Care Clerkship
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.
- Evaluation, management and knowledge of wound care in surgical patients.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2018
SUR 631  Surgical Oncology Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
- Evaluation, management and knowledge of surgical oncology conditions.  
- Request the use of the Pass-No Grade (P-N) system.  
- Request the use of ET-Extension to postpone grading.  
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

SUR 632  Surgical Nutrition Clerkship  
Fall of every year. Spring of every year. Summer of every year. 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 or HM 556 R: Open to graduate-professional students in the College of Human Medicine.  
- Evaluation, management and knowledge of nutrition in critically-ill surgical patients.  
- Request the use of the Pass-No Grade (P-N) system.  
- Request the use of ET-Extension to postpone grading.  
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.  
Effective Summer 2018

TE 809  Inquiry-Oriented Instructional Strategies for the Elementary Classroom  
Spring of every year. 3(3-0) RB: Students with prior or concurrent experience teaching in elementary classrooms will be best served by the course.  
- Learning goals for Prekindergarten to Grade 5 children in mathematics, science, and social studies. Research related to engaged learning. Design and implementation of inquiry-based pedagogical practices, such as group-worthy tasks, place-based learning, and integrated unit planning.  
Effective Spring 2018
PART III – COURSE CHANGES

DEPARTMENT OF ADVERTISING AND PUBLIC RELATIONS

ADV 493  Advertising and Public Relations Internship
Fall of every year. Spring of every year. Summer of every year. **1 to 6 credits, 1 to 12 credits.** A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 12 credits in all enrollments for this course. **P: ADV 205 R: Open to undergraduate students in the Department of Advertising, Public Relations and Retailing. Approval of department; application required.** **R: Open to undergraduate students in the Department of Advertising and Public Relations. Approval of department; application required.**

Supervised experience in a professional environment. Request the use of the Pass-No Grade (P-N) system. 
**Effective Fall 2014 Effective Spring 2018**

ADV 823  Consumer Behavior Theories
Fall of every year. **Spring of every year. 3(3-0)**
Concepts and theories from behavioral sciences applied to consumer decision making. Application of theories to develop consumer behavior research studies, advertising and public relations programs. Interpersonal and mass communication applied to consumer decision making. 
**Effective Fall 2014 Effective Spring 2018**

ADV 826  Advertising and Promotion Management
Fall of every year. **Spring of every year. 3(3-0) P: MKT 805 and ADV 823 and (COM 803 or concurrently)**
Planning promotional strategy. Establishing policies for decision-making. Execution and evaluation of advertising and sales promotion programs. Emphasis on case analysis. 
**Effective Fall 2014 Effective Summer 2018**

ADV 865  Advertising and Society
Fall of every year. **3(3-0)**
Impact of advertising on individuals, society, and the economy. Public policy issues relevant to advertising. Regulation by government and industry. 
**Effective Fall 2014 Effective Summer 2018**

ADV 890  Independent Study
Fall of every year. Spring of every year. Summer of every year. **1 to 6 credits, 1 to 9 credits.** A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 9 credits in all enrollments for this course. **R: Open to graduate students. Approval of department.**

Directed study under faculty supervision. 
**Effective Fall 2014 Effective Spring 2018**

INSTITUTE OF AGRICULTURAL TECHNOLOGY

AT 293  Professional Internship in Agricultural Technology
Fall of every year. Spring of every year. Summer of every year. **3 to 6 credits.** A student may earn a maximum of 6 credits in all enrollments for this course. **R: Open to freshmen or sophomores or agricultural technology students in the Institute of Agricultural Technology. Supervised professional experience in agencies, business and industry related to a student’s major field of study.**

Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment. 
**Effective Fall 2014 Effective Summer 2018**
DEPARTMENT OF ANTHROPOLOGY

ANP 430  Culture, Resources, and Power  
Fall of odd years. 3(3-0) P: Completion of Tier I Writing Requirement R: Not open to freshmen. Not open to students with credit in ANP 836.  
Production of knowledge and expertise regarding development, environment, culture, and rights. Effects of applying this knowledge.  
DELETE COURSE  
Effective Fall 2017

ANP 813  Power and Political Subjectivity  
Fall of odd years. 3(3-0) RB: ANP 830 or similar relevant coursework in sociocultural anthropology. R: Open to graduate students or approval of department.  
Agency, political community, recognition, subject formation, subjection. Philosophical influences on anthropology of the subject, such as Hegel, Marx, Freud, Fanon, Foucault, Butler. Ethnographies of the politics of community. Nationalism, race, sexuality, violence, religion, domination, and resistance.  
DELETE COURSE  
Effective Fall 2017

BIOMEDICAL LABORATORY DIAGNOSTICS PROGRAM

BLD 204  Mechanisms of Disease  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: BS 161 or LB 145 or BS 181H P: PSL 310 or PSL 431 R: Not open to seniors.  
Pathophysiological mechanisms of diseases. Selected applications to organ system pathology.  
SA: MT 204  
Effective Fall 2014 Effective Fall 2018

BLD 213  Application of Clinical Laboratory Principles  
Clinical Laboratory Methods  
Fall of every year. Spring of every year. Summer of every year. 2(2-2) P: (CEM 141 and CEM 161) or (LB 171 and LB 171L) RB: BS 171 R: Open to students in the Human Biology Major or in the Biomedical Laboratory Science Major or in the Clinical Laboratory Sciences Major or in the Lyman Briggs Biomedical Laboratory Science Coordinate Major. R: Open to students in the Human Biology Major or in the Biomedical Laboratory Science Major or in the Lyman Briggs Biomedical Laboratory Science Coordinate Major.  
Lab safety and standards of good laboratory practice including specimen handling and processing. Application of technologies and techniques to the performance of clinical diagnostic testing.  
SA: MT 213 SA: MT 213, BLD 213  
Effective Fall 2014 Effective Fall 2018

BLD 220  Preparing for a Health Professions Career  
Spring of every year. 1(1-0) R: Open to sophomores or juniors.  
Development of skills needed for success in a health professions career. Historical, economic, sociological and ethical perspectives on the U.S. health professions with focus on medical laboratory careers.  
SA: MT 220  
DELETE COURSE  
Effective Fall 2018
BLD 324  **Fundamentals of Hematology, Hemostasis, and Urinalysis**  
**Hematology and Hemostasis**  
Fall of every year. 3(3-0) P: (BS 181 or concurrently) or (BS 181H or concurrently) P: BLD 204 or concurrently RB: (PSL 310 or concurrently) or (PSL 250 or concurrently) or (PSL 431 or concurrently)  
Physiology and biochemistry of normal hematologic, hemostatic, and urinary systems. Principles of diagnostic assays to detect diseases affecting those systems. Physiology and biochemistry of normal hematologic and hemostatic systems. Principles of diagnostic assays to detect diseases affecting those systems.  
SA: MT 324  
**Effective Fall 2014**  
**Effective Fall 2018**

BLD 324L  **Introductory Laboratory in Hematology, Hemostasis and Urinalysis**  
Fall of every year. 1(0-3) P: BLD 324 or concurrently R: Open to students in the Clinical Laboratory Sciences major.  
Routine laboratory assays used to assess the health of the hematological, hemostatic, and urinary systems.  
**DELETE COURSE**  
**Effective Fall 2018**

BLD 413  **Advanced Biomedical Laboratory Diagnostics Laboratory**  
Spring of every year. 1(0-3) P: BLD 213 and BLD 324 and BLD 434 and BLD 435 and MMG 463 RB: BLD 424 and BLD 430 R: Open to students in the Diagnostic Molecular Science major or in the Biomedical Laboratory Science major or in the Lyman Briggs Diagnostic Molecular Science Coordinate Major or in the Lyman Briggs Biomedical Science Coordinate major.  
Diagnostic assays across various disciplines within the clinical laboratory (microbiology, immunohematology, hematology and molecular diagnostics) as well as data interpretation and problem solving skills.  
**DELETE COURSE**  
**Effective Spring 2018**

BLD 414  **Clinical Chemistry Analysis and Practice**  
Spring of every year. 3(3-0) P: BLD 213 and (STT 200 or STT 201 or STT 231 or STT 351 or STT 421) RB: PHY 231 or LB 273 R: Open to students in the Biomedical Laboratory Science major or in the Lyman Briggs Biomedical Science Coordinate major. Not open to students with credit in BLD 417.  
Concepts and principles of analytic methods commonly used in the clinical laboratory. Qualitative and quantitative features of instrumental analysis. Issues of quality control and quality assurance, method evaluation and standards of laboratory practice.  
SA: MT 417  
**DELETE COURSE**  
**Effective Fall 2017**

BLD 416  **Clinical Chemistry**  
Fall of every year. 4(4-0) P: BLD 213 and (BMB 401 or BMB 461) and (PSL 250 or PSL 310 or PSL 431) RB: BLD 414 or (BLD 417 and CEM 333)  
Correlation of laboratory test results with normal physiology and biochemistry and with disease states. Metabolic and endocrine systems. Acquired and inherited diseases. Therapeutic drug monitoring, and toxicology.  
SA: MT 416  
**DELETE COURSE**  
**Effective Fall 2017**

BLD 417  **Quality Processes in Diagnostic Laboratory Testing**  
Spring of every year. 2(2-0) P: BLD 213 and (STT 200 or STT 201 or STT 231 or STT 351 or STT 421) RB: PHY 231 or LB 273 R: Open to students in the Clinical Laboratory Sciences Major. Not open to students with credit in BLD 414.  
Statistical methods for validating diagnostic laboratory tests including quality control processes, proficiency testing, method evaluation, related regulatory requirements, laboratory information systems, and laboratory mathematics.  
SA: MT 414, MT 417  
**DELETE COURSE**  
**Effective Fall 2017**
PART III – COURSE CHANGES

BLD 424  
**Advanced Hematology, Hemostasis and Urinalysis**  
Advanced Hematology and Hemostasis  
Spring of every year. 2(2-0) P: BLD 324 or (BLD 324 and BMB 401) or (BLD 324 and BMB 461 and BMB 462) P: (PSL 310 or concurrently) or (PSL 250 or concurrently) or PSL 431) and (BLD 416 and BLD 430 or concurrently) and BLD 434 and (BLD 435 or concurrently) and (PSL 250 or PSL 310) R: Open to undergraduate students in the Biomedical Laboratory Diagnostics Program.  
Etiology and pathogenesis of diseases of the hematologic, hemostatic and urinary systems including anemias, leukemias, and hemophilias. Diagnostic testing for such diseases.  
SA: MT 422, MT 424  
Effective Fall 2014  
Effective Fall 2018

BLD 424L  
**Advanced Laboratory in Hematology, Hemostasis, and Urinalysis**  
Advanced Hematology, Hemostasis and Urinalysis Laboratory  
Spring of every year. 1(0-3) P: BLD 314L and BLD 324 and (BLD 424 or concurrently) R: Open to undergraduate students in the Biomedical Laboratory Diagnostics Program.  
Specialized and advanced assays used in the diagnosis of diseases of the hematological, hemostatic, and urinary systems.  
SA: MT 424L, MT 423  
Effective Fall 2014  
Effective Fall 2018

BLD 430  
**Molecular Laboratory Diagnostics**  
Molecular Diagnostics  
Spring of every year. 2(2-0) P: BS 161 or LB 145 or BS 181H P: (BS 161 or LB 145 or BS 181H) and (BLD 204 and BLD 313)  
Concepts and principles of molecular analysis applied to medical diagnostics and related applications.  
SA: MT 430  
Effective Fall 2014  
Effective Fall 2018

BLD 434  
**Clinical Immunology**  
Fall of every year.  
Grand Rapids: Spring of every year.  
Grand Rapids: Summer of every year.  
Grand Rapids: 3(3-0) P: BS 161 or LB 145 or BS 181H P: BLD 204 P: (PSL 310 or PSL 310 or PSL 431) and (BLD 204 and BLD 213 and MMG 201) RB: MMG 201 or MMG 301 Not open to students with credit in MMG 451.  
Concepts of innate, cellular, and humoral immunity. Immunodeficiency and autoimmunity. Principles and applications of immunoassays in medical laboratories.  
SA: MT 432, MT 434  
Effective Fall 2014  
Effective Fall 2018

BLD 435  
**Transfusion Medicine**  
Immunohematology  
Spring of every year. 2(2-0) or 2(3-0) P: BLD 434 or MMG 451 P: (BLD 313) and (BLD 434 or MMG 451)  
Principles and practice of transfusion medicine including blood typing. Offered first ten weeks of semester.  
SA: MT 435, MT 432  
Effective Spring 2017  
Effective Fall 2018
BLD 433  Clinical Immunology and Immunohematology Laboratory
Immunohematology Laboratory
Spring of every year. 1(0-3) P: BLD 213 and (BLD 435 or concurrently) P: BLD 314L and BLD 435
R: Open to students in the Clinical Laboratory Sciences major.  R: Open to undergraduate students in the Biomedical Laboratory Diagnostics Program.
Immunologic methods for disease detection. Methods of blood typing and pre-transfusion testing. Methods of blood typing and pre-transfusion testing.
SA: MT 433 SA: MT 433, BLD 433
Effective Fall 2014 Effective Fall 2018

BLD 435L Clinical Immunology and Immunohematology Laboratory
Immunohematology Laboratory
Spring of every year. 1(0-3) P: BLD 213 and (BLD 435 or concurrently) P: BLD 314L and BLD 435
R: Open to students in the Clinical Laboratory Sciences major.  R: Open to undergraduate students in the Biomedical Laboratory Diagnostics Program.
Immunologic methods for disease detection. Methods of blood typing and pre-transfusion testing. Methods of blood typing and pre-transfusion testing.
SA: MT 433 SA: MT 433, BLD 433
Effective Fall 2014 Effective Fall 2018

BLD 437  Clinical Applications of Diagnostic Molecular Science
Spring of every year. 2(2-0) P: BLD 436 Not open to students with credit in BLD 831.
Application of molecular diagnostic methods in clinical and other types of laboratory disciplines.
SA: MT 437
DELETE COURSE
Effective Fall 2017

BLD 438  Molecular Diagnostic Laboratory
Fall of every year. 2(0-6) P: BLD 436 Not open to students with credit in BLD 832.
Laboratory in molecular techniques with emphasis on clinical and diagnostic applications.
SA: MT 438
DELETE COURSE
Effective Fall 2017

BLD 439  Histocompatibility and Immunogenetics
Spring of every year. 1(1-0) P: BLD 434 or MMG 451 RB: BLD 204 and BLD 435 R: Open to juniors or seniors in the College of Natural Science or in the Lyman Briggs College.
The theory and principles of histocompatibility and immunogenetics as applied to transplant medicine.
Effective Spring 2017 Effective Spring 2018

BLD 442  Education and Management in the Clinical Laboratory
Spring of every year. 2(2-0) P: (MTH 103 or MTH 116) or (STT 200 or STT 201 or STT 231 or STT 351 or STT 421) RB: BLD 220 R: Open to students in the Clinical Laboratory Sciences Major.
Basic principles and concepts in education and management in clinical laboratories. Systematic approach to instructional design, delivery and evaluation. Principles of leadership, personnel management, fiscal management, and regulatory compliance.
SA: MT 442
DELETE COURSE
Effective Spring 2018

BLD 450  Eukaryotic Pathogens
Spring of every year. 3(3-0) P: (BS 161 or LB 145 or BS 181H) and (CEM 141 or CEM 151 or CEM 181H or LB 171) RB: MMG 201 or MMG 301
Medically important fungi and parasites. Host-parasite relationships, life cycles, culture, identification, and associated diseases.
SA: MT 450
DELETE COURSE
Effective Fall 2018

BLD 455  Integrating Clinical Laboratory Science Discipline (W)
Fall of every year. Spring of every year. 2(2-0) P: ((BLD 324 or concurrently) or (BLD 417 or concurrently) or (BLD 416 or concurrently) or (MMG 463 or concurrently) or (BLD 435 or concurrently) or (BLD 436 or concurrently)) and completion of Tier I writing requirement R: Open to undergraduate students in the Clinical Laboratory Sciences major or in the Biomedical Laboratory Science major or in the Diagnostic Molecular Science major.
Problem oriented approach integrating topics from biomedical laboratory diagnostics courses with emphasis on writing experience in the major and on critical thinking skills.
SA: MT 455
DELETE COURSE
Effective Fall 2018
PART III – COURSE CHANGES

BLD 471
Advanced Clinical Chemistry Laboratory
Fall of every year. Spring of every year. Summer of every year. 3 credits. P: CEM 333 R: Open to students in the Clinical Laboratory Sciences major. R: Open to students in the Biomedical Laboratory Diagnostics Program. Approval of department.

Application and integration of theory and technical skills in clinical chemistry and biochemistry.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 471 SA: MT 471, BLD 471

Effective Fall 2014 Effective Fall 2018

BLD 472
Advanced Clinical Chemistry
Fall of every year. Spring of every year. Summer of every year. 1 credit. P: BLD 416 and BLD 417 R: Open to seniors in the Clinical Laboratory Sciences major.
Theoretical aspects of clinical chemistry, chemical and biochemical reactions, statistical analysis, and pathophysiologic relationships. Integration of cognitive material with clinical laboratory test results.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 472
DELETE COURSE
Effective Fall 2019

BLD 473
Advanced Clinical Hematology and Body Fluids Laboratory
Fall of every year. Spring of every year. Summer of every year. 3 credits. P: BLD 424L R: Open to seniors in the Clinical Laboratory Sciences major. R: Open to students in the Biomedical Laboratory Diagnostics Program. Approval of department.

Application and integration of theory and technical skills in hematology, hemostasis, and body fluid analysis.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 473 SA: MT 473, BLD 473

Effective Fall 2014 Effective Fall 2018

BLD 474
Advanced Clinical Hematology and Body Fluids
Fall of every year. Spring of every year. Summer of every year. 1 credit. P: BLD 424 R: Open to seniors in the Clinical Laboratory Sciences major.
Theoretical aspects of advanced hematology, hemostasis and body fluid analysis. Integration of cognitive material with clinical laboratory test results.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 474
DELETE COURSE
Effective Fall 2019

BLD 475
Advanced Clinical Immunology and Immunohematology Laboratory
Fall of every year. Spring of every year. Summer of every year. 2 credits. P: BLD 433 P: BLD 435L R: Open to seniors in the Clinical Laboratory Sciences major. R: Open to students in the Biomedical Laboratory Diagnostics Program. Approval of department.

Application and integration of theory and technical skills in immunology and immunohematology.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 475 SA: MT 475, BLD 475

Effective Fall 2014 Effective Fall 2018
BLD 476  
Advanced Clinical Immunology and Immunohematology  
Fall of every year. Spring of every year. Summer of every year. 1 credit. P: BLD 433 and BLD 434 and BLD 435  R: Open to seniors in the Clinical Laboratory Sciences major.  
Theoretical aspects of immunology and immunohematology. Integration of cognitive material with clinical laboratory test results.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
SA: MT 476  
DELETE COURSE  
Effective Fall 2019

BLD 477  
BLD 477L  
Advanced Clinical Microbiology Laboratory  
Fall of every year. Spring of every year. Summer of every year. 3 credits. P: MMG 464 and BLD 450 P: MMG 465L  R: Open to seniors in the Clinical Laboratory Sciences major.  
Application and integration of theory and technical skills in clinical microbiology and infectious disease.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
SA: MT 477-SA; MT 477, BLD 477  
Effective Fall 2014 Effective Fall 2018

BLD 478  
Advanced Clinical Microbiology  
Fall of every year. Spring of every year. Summer of every year. 1 credit. P: MMG 463 and BLD 450 and BLD 498  R: Open to seniors in the Clinical Laboratory Sciences major.  
Theoretical aspects of clinical microbiology and infectious disease. Integration of cognitive material with clinical laboratory test results.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
SA: MT 478  
DELETE COURSE  
Effective Fall 2019

BLD 479  
Professional Behavior in Clinical Laboratory Science  
Professional Behavior in Medical Laboratory Science  
Fall of every year. Spring of every year. Summer of every year. 1(0-2) P: (BLD 220 and BLD 442) and ((BLD 471 or concurrently) or (BLD 473 or concurrently) or (BLD 475 or concurrently)) or (BLD 477 or concurrently)) P: (BLD 442W and BLD 445) and ((BLD 471L or concurrently) and (BLD 473L or concurrently) and (BLD 475L or concurrently) and (BLD 477L or concurrently))  R: Open to students in the Clinical Laboratory Sciences major.  
Application of professional behavior principles to practical experiences in clinical laboratory science. Application of professional behavior principles to practical experiences in medical laboratory science.  
Request the use of ET-Extension to postpone grading.  
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.  
SA: MT 479  
Effective Fall 2014 Effective Fall 2018
BLD 482  Advanced Diagnostic Molecular Science  
Spring of every year. 2 credits. R: Open to students in the Diagnostic Molecular Science major. C: BLD 483 concurrently or BLD 484 concurrently or BLD 485 concurrently or BLD 486 concurrently.  
Integration of principles and concepts in diagnostic molecular science with diagnostic laboratory test results. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
SA: MT 482 
DELETE COURSE  
Effective Fall 2017  

BLD 483  Molecular Diagnostic Experience in Hematopathology and Oncology  
Spring of every year. 2 credits. P: BLD 438 R: Open to students in the Diagnostic Molecular Science major. C: BLD 482 concurrently. 
Clinical experience in molecular diagnostic laboratories with applications in hematopathology and oncology. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
SA: MT 483 
DELETE COURSE  
Effective Fall 2017  

BLD 484  Molecular Diagnostic Experience in Infectious Disease  
Spring of every year. 2 credits. P: BLD 438 R: Open to students in the Diagnostic Molecular Science major. C: BLD 437 concurrently. 
Clinical experience in molecular diagnostic laboratories with applications to infectious disease diagnosis. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
SA: MT 484 
DELETE COURSE  
Effective Fall 2017  

BLD 485  Molecular Diagnostic Experience in Inherited and Predictive Genetics  
Spring of every year. 2 credits. P: BLD 438 R: Open to students in the Diagnostic Molecular Science major. C: BLD 482 concurrently. 
Clinical experience in molecular diagnostic laboratories with applications in inherited and predictive genetics. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
SA: MT 485 
DELETE COURSE  
Effective Fall 2017  

BLD 486  Molecular Diagnostic Experience in Genotyping and Individual Identification  
Spring of every year. 2 credits. P: BLD 438 R: Open to students in the Diagnostic Molecular Science major. C: BLD 482 concurrently. 
Clinical experience in molecular diagnostic laboratories with applications to genotyping and identification of individuals. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
SA: MT 486 
DELETE COURSE  
Effective Fall 2017
BLD 495  Directed Study
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to students in the Clinical Laboratory Sciences major or in the Diagnostic Molecular Science major or in the Lyman Briggs School-Medical Technology Coordinate Major or in the Medical Technology major. R: Open to students in the Biomedical Laboratory Science Major or in the Lyman Briggs Biomedical Laboratory Science Coordinate Major.
Faculty directed study including assigned readings, reviews of appropriate scientific periodicals, research, and laboratory experience.
SA: MT 495
Effective Fall 2014 Effective Fall 2018

BLD 498  Focused Problems in Clinical Laboratory Science
Spring of every year. 2(1-2) P: BLD 417 and BLD 434 and (BLD 424 or concurrently) and (BLD 450 or concurrently) R: Open to students in the Clinical Laboratory Sciences major.
Case study problems of medical microbiology, hematology, and clinical chemistry.
SA: MT 495 MT 498
DELETE COURSE
Effective Spring 2018

BLD 498L  Infectious Disease Diagnostic Laboratory
Spring of every year. 1(0-3) P: MMG 464 and (BLD 450 or concurrently) RB: BLD 430 and BLD 434 R: Open to undergraduate students in the Clinical Laboratory Sciences major.
Applying pre-analytical, analytical, and post-analytical principles to the identification of infectious agents in unknown samples.
DELETE COURSE
Effective Spring 2018

BLD 801  Biomedical Laboratory Diagnostics Seminar
Fall of every year. Spring of every year. 1(1-0) A student may earn a maximum of 2 credits in all enrollments for this course.
Current research topics in clinical laboratory sciences.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 4 semesters after the end of the semester of enrollment. The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 801
Effective Fall 2009 Effective Fall 2018

BLD 838  Clinical Context of Blood Product Management
Fall of every year. Summer of every year. 1(1-0) RB: Experience in transfusion medicine
Effective blood product management in the context of high use, high demand clinical settings.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
Effective Summer 2016 Effective Fall 2018

THE ELI BROAD COLLEGE OF BUSINESS

MBA 802  Financial Accounting and Reporting Strategy
Fall of every year. Summer of every year. 1 to 3 credits. R: Open to MBA students. R: Open to MBA students or approval of department.
Effective Fall 2013 Effective Summer 2018
MBA 804  Applied Data Analysis for Managers  
Fall of every year. Spring of every year. Summer of every year. 1 to 3 credits. RB: STT 315 R: Open to MBA students. R: Open to MBA students or approval of department. Not open to students with credit in SCM 833. Analysis of business and economic data to support managerial decision-making. Building, interpreting, and applying time-series, regression, and forecasting models. Effective Fall 2013 Effective Summer 2018

MBA 814  Applied Economics  
Spring of every year. Summer of every year. 1 to 3 credits. R: Open to MBA students. R: Open to MBA students or approval of department. Economic view of the firm. Use marginal analysis to analyze firms’ decisions such as pricing, entry, and price discrimination. Use game theory to analyze firms’ strategic behavior, principal-agent relationships, adverse selection, and signaling. Effective Fall 2013 Effective Summer 2018

MBA 823  Information Technology Strategy  
Spring of every year. Summer of every year. 1 to 3 credits. R: Open to MBA students. R: Open to MBA students or approval of department. Integrative perspectives on the use, management, and economic value of information technologies in organizations. Financial and strategic assessment of the business value of information technologies. Transformational effects of business intelligence and social networking technologies. Technology strategy and entrepreneurship. Effective Fall 2013 Effective Summer 2018

DEPARTMENT OF COUNSELING, EDUCATIONAL PSYCHOLOGY, AND SPECIAL EDUCATION

CEP 452  Universal Design for Learning in the General Education Classroom  
Fall of every year. 3(1-2) P: CEP 240 R: Open to students in the Special Education-Learning Disabilities Major. Educating students with disabilities in the general education classroom through principles of Universal Design for Learning and assistive technology. Assistive Technology (AT) for advancing educational outcomes for K-12 students with learning disabilities; applications of technology to compensate for disabilities and improve educational, social, and behavioral competences. Effective Spring 2014 Effective Fall 2018

DEPARTMENT OF FAMILY MEDICINE

FM 610  Elective Clerkship in Family Practice  
Outpatient Family Medicine Clerkship  
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: third or fourth year student. RB: HM 556 or FM 608 R: Open to graduate-professional students in the College of Human Medicine. Experience in family practice in diverse settings. Primary, continuing and comprehensive care. Skills and knowledge in interviewing, clinical procedures, diagnosis, use of community resource utilization, and health maintenance in the outpatient healthcare setting. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Summer 2013 Effective Summer 2018
PART III – COURSE CHANGES

FM 611  Family Practice Geriatric Clerkship
Geriatric Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. P: FM 608 or MED 608 RB: HM 556 or FM 608 or MED 608 R: Open to graduate-professional students in the College of Human Medicine. 

Clerkship in the primary medical care of older adults. Diagnosis, treatment, interdisciplinary team evaluation in geriatric medicine. Advanced care directive processes and procedures. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 1 semester after the end of the semester of enrollment. Effective Summer 2013 Effective Summer 2018

FM 612  Inpatient Clerkship in Family Practice
Inpatient Family Medicine Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 or FM 608 R: Open to graduate-professional students in the College of Human Medicine.

Demonstration of the role of the family physician in hospital settings. Management of consultations and referrals. Skills and knowledge in interviewing, clinical procedures, diagnosis, interdisciplinary evaluation, and use of community resources in the inpatient healthcare setting. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Summer 2013 Effective Summer 2018

FM 617  Sports Medicine Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: HM 556 or FM 608 R: Open to graduate-professional students in the College of Human Medicine.

Primary care aspects of sports medicine. Care of acute and chronic sports injuries, mostly of college level athletes. Evaluation and treatment of acute and chronic sports injuries in the primary care setting. Acute and emergency care, transportation, and rehabilitation training for collegiate and/or local community athletes. Interdisciplinary care and consultation of athletes. Philosophy and basic science of sports medicine care. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Summer 2013 Effective Summer 2018

FM 618  Palliative Care/End of Life
Palliative and End of Life Care Clerkship
Fall of every year. Spring of every year. Summer of every year. 6(40-0) 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: FM 608 and PHD 600 and MED 608 and PSC 608 and OCR 608 and SUP 608 RB: HM 556 or FM 608 R: Open to graduate-professional students in the College of Human Medicine.

Basic knowledge and skills necessary to manage patients and families faced with end of life illnesses. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment. Effective Summer 2013 Effective Summer 2018
PART III – COURSE CHANGES

DEPARTMENT OF FINANCE

FI 801  Managerial Finance
Fall of every year. Spring of every year. Summer of every year. 3(3-0) 1 to 3 credits. RB: (ACC 800) and students in programs for which FI 801 is a catalog-listed requirement. RB: A first course in Accounting. R: Open only to students in Professional Accounting. R: Open to graduate students in the Eli Broad College of Business and The Eli Broad Graduate School of Management and not open to MBA students. Short-, intermediate- and long-term problems. Financial planning and control. Applications in domestic and international settings. Short-, intermediate- and long-term problems in Finance. Financial planning and control. Applications in domestic and international settings.
Effective Spring 2003 Effective Fall 2018

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION

FSC 815  Food Laws and Regulations in Asia
Food Laws and Regulations in China
Summer of every year. 3(3-0) RB: Food science, law, food safety, international development or related disciplines. Not open to students with credit in LAW 810J. Current issues that have shaped the regulation of food in Asia, regional characteristics and culture, basic food laws, agency responsibilities, product registration requirements, basic standards, food labeling, food safety, food additives, food import systems. Special emphasis will be given to the food regulations of Japan, China, Korea and Southeast Asia (ASEAN). Current issues that have shaped the regulation of food in China, regional characteristics and culture, food laws, agency responsibilities, product registration requirements, basic standards, food labeling, food safety, food additives, and food import systems.
Effective Summer 2012 Effective Summer 2018

COLLEGE OF HUMAN MEDICINE

HM 632  Rural Community Health
Spring of every year. 6(6-0) 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: Completion of preclinical requirements for the Leadership in Rural Medicine Certificate. R: Approval of college. Patient centered and community based experience in rural medicine and rural medical health systems. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2013 Effective Summer 2018

HM 633  Advanced Rural Community Health
Spring of every year. 6(6-0) 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: Completion of preclinical requirements for the Leadership in Rural Medicine Certificate. R: Approval of college. Provide students with experiences in rural medicine and rural community health that will enable them to better address the medical needs of rural populations. Advanced clinical skills, knowledge, and experience in rural patient medicine, rural community medicine, and rural medical health systems. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2013 Effective Summer 2018
HM 691  Research Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits, 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 or HM 556 R: Open only to graduate-professional students in the College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. Approval of college.

Biological, behavioral, or clinical research project. Data gathering, analysis, interpretation, and presentation of a biological, behavioral, or clinical research project.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Spring 1995 Effective Summer 2018

HM 801  Introduction to Public Health
Fall of every year. Spring of every year. Summer of every year. 3(3-0) RB: Academic or professional background in public health or public health-related discipline. R: Open to master's students in the Public Health major or in the Public Health Specialization. R: Open to students in the Public Health Major or in the Public Health Graduate Certificate.

Philosophy and concepts of the discipline of public health. History and development of the profession. Ethical, legal and political considerations. Provide first introduction to core public health areas. Introduction to public health philosophy and core knowledge areas. Ethical, legal and political considerations. Emphasis on principles and tools for population health, disease prevention and health promotion, health determinants, healthcare and public health systems.
Effective Fall 2008 Effective Spring 2018

SCHOOL OF HUMAN RESOURCES AND LABOR RELATIONS

HRLR 289  Navigating the World of Work
Summer of every year. 3(3-0)
Changing workplace and career management after college. Current business strategies, pay and benefits, labor relations, emerging career trends, and management of work and family.
DELETE COURSE
Effective Fall 2018

DEPARTMENT OF MEDICINE

MED 609  Hematology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits, 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 or HM 556 R: Open only to graduate-professional students in the College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018
MED 610  Oncology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine.

Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 611  Cardiology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine.

Evaluation of patients with cardiac diseases. Special diagnostic procedures including cardiac cuticularization, phonocardiography, echocardiography, and electrocardiography. Evaluation of patients with cardiac diseases. Special diagnostic procedures including cardiac cuticularization, phonocardiography, echocardiography, and electrocardiography. Pathobiology of heart disease.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 612  Nephrology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine.

Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 613  Dermatology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine.

Experience in a dermatologist's office to develop clinical, observational, and diagnostic skills in dermatology. Clinical, observational and diagnostic skills in dermatology. Treatment of common dermatologic problems in outpatient and inpatient setting.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018
MED 614  Pulmonary Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 615  Gastroenterology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 616  Allergy Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Ambulatory and hospital based experience to develop diagnostic skills in allergy. Review of basic therapeutics related to allergic diseases. Ambulatory and hospital based experience to develop diagnostic and management skills in allergy. Therapy for common allergic diseases.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 618  Infectious Diseases Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Clinical problems in infectious and immunologic diseases. Integrated basic science input is provided in seminars. Clinical problems in infectious and immunologic diseases. Integrated pathobiology of host defense and pathogen interactions. Standard and emerging pharmacotherapy.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018
MED 622  Endocrinology and Metabolism Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. Clinical and/or clinical-research clerkship: endocrine diseases, electrolyte abnormalities, endocrine hypertension, or diabetes mellitus. Clinical and/or clinical-research experience in endocrine diseases, electrolyte abnormalities, endocrine hypertension, or diabetes mellitus. Pathobiology of major endocrine and metabolic disorders. 
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
SA: MED 620
Effective Summer 1995 Effective Summer 2018

MED 626  Physical Medicine and Rehabilitation Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 6(6-0) A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. Developing regimens for physical medicine procedures, occupational therapy and rehabilitation skills. Rehabilitation medicine using a comprehensive, multidisciplinary approach. Regimens for physical medicine procedures, occupational therapy, rehabilitation skills. Evaluation of disabled patients. Indications for electrodiagnostic procedures. 
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 627  Rheumatology Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. Combined ambulatory and hospital consultative clerkship for diagnostic skills in areas of rheumatic diseases. Combined ambulatory and hospital consultative clerkship for diagnostic skills and treatment of rheumatic diseases. 
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

MED 628  Advanced Internal Medicine
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. 
Clinical experiences to refine diagnostic and management skills in general internal medicine. Advanced clinical experiences to refine diagnostic and management skills in complicated general internal medicine patients. 
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018
MED 632  Occupational Medicine Clerkship
Fall of every year. Spring of every year. Summer of every year. 2 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. R: MED 608 RB: MED 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Health problems of chemical and mineral dust, radiation, and repetitive trauma.
Occupational and environmental differential diagnosis of common diseases due to chemical and mineral dust, radiation, and repetitive trauma. Legal and ethical dimensions.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

COLLEGE OF MUSIC

MUS 977  Schenkerian Analysis II
Spring of odd years. Spring of even years. 3(3-0) P: MUS 874 RB: Strong familiarity with advanced tonal theory, form, and Schenkerian analysis. R: Open to graduate students in the College of Music.
Continuation of MUS 874. Analysis of complete compositions or movements from multi-movement works. Compositions to be studied will include ternary and sonata-form pieces. Repertoire of styles will range from Baroque to Romantic. Making voice-leading graphs to become more familiar with Schenker’s writings and the secondary literature. Continuation of MUS 874. Analysis of complete compositions or movements from multi-movement works. Compositions to be studied will include ternary and sonata-form pieces. Repertoire of styles will range from Baroque to Romantic. Making voice-leading graphs to become more familiar with Schenker’s writings and the secondary literature.
Effective Spring 2017 Effective Fall 2019

PROGRAM IN NEUROSCIENCE

NEU 843  Methods for Assessing the Nervous System
Spring of every year. 3(3-0) 2(2-0) RB: (NEU 840 or concurrently) or (NEU 841 or concurrently) Introduction to the various techniques and methods used to study brain structure and function.
Effective Spring 2017 Effective Summer 2018

COLLEGE OF NURSING

NUR 490  Independent Study in Nursing
Fall of every year. Spring of every year. Summer of every year. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of college.
Individualized area of study in nursing.
Request the use of the Pass-No Grade (P-N) system.
Effective Summer 2017 Effective Summer 2018

NUR 922  Wellness and Risk Reduction Behaviors
Fall of even years. Spring of odd years. 3(3-0) R: Open to graduate students in the College of Nursing.
Current state of the science related to wellness and risk reduction behaviors and interventions to improve health outcomes for various populations across the lifespan.
Effective Fall 2017 Effective Spring 2018
PART III – COURSE CHANGES

NUR 923  Self and Symptom Management in Chronic Illness
Fall of odd years, Spring of even years. 3(3-0) R: Open to graduate students in the College of Nursing.
Current state of the science related to self and symptom management and interventions to improve chronic illness outcomes for various populations across the lifespan.
Effective Fall 2017 Effective Spring 2018

DEPARTMENT OF OBSTETRICS, GYNECOLOGY AND REPRODUCTIVE BIOLOGY

OGR 610  Perinatology Clerkship
Fall of every year. Spring of every year. Summer of every year. 4 to 6 credits, 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: OGR 641 or OGR 608 RB: OGR 608 R: Open to graduate-professional students or human medicine students in the College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Additional exposure to high risk obstetrics including prenatal diagnosis and counseling, antepartum evaluation, and care of the high risk patient. Management of the intrapartum high risk patient. High risk obstetrics including prenatal diagnosis and counseling, antepartum evaluation, and care of the high risk patient. Management of the intrapartum high risk patient.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2015 Effective Summer 2018

OGR 611  Reproductive Endocrinology and Infertility Clerkship
Fall of every year. Spring of every year. Summer of every year. 4 to 6 credits, 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: OGR 641 or OGR 608 RB: OGR 608 R: Open to graduate-professional students or human medicine students in the College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2015 Effective Summer 2018

OGR 612  Gynecologic Oncology Clerkship
Fall of every year. Spring of every year. Summer of every year. 4 to 6 credits, 3 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course. P: OGR 608 or OGR 641 RB: OGR 608 R: Open to graduate-professional students or human medicine students in the College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Added clinical experience in inpatient and ambulatory gynecologic oncology, breast disease, and complicated benign gynecology in the preceptor mode. Pre-treatment evaluation and cancer management, including surgery. Inpatient and ambulatory gynecologic oncology, breast disease, and complicated benign gynecology in the preceptor mode. Pre-treatment evaluation and cancer management, including surgery.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2015 Effective Summer 2018
DEPARTMENT OF PEDIATRICS AND HUMAN DEVELOPMENT

PHD 601  Human Development and Pediatric Sub-specialties
Fall of every year. Spring of every year. Summer of every year. 6 to 24 credits. 3 to 6 credits. A
student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB:
PHD 600 or HM 556 R: Open only to graduate professional students in College of Human
Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Experience in clinical, behavioral, and basic sciences related to pediatrics and human
development.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2
semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

PHD 602  Ambulatory Pediatrics
Ambulatory Pediatric Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A
student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a
maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R:
Open only to graduate professional students in College of Human Medicine. R: Open to graduate-
professional students in the College of Human Medicine.
Clinical experience in outpatient and community setting involving ongoing child health
care.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2
semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

PHD 603  Pediatric Infectious Diseases Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A
student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a
maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R:
Open only to graduate professional students in College of Human Medicine. R: Open to graduate-
professional students in the College of Human Medicine.
Office, clinic, and inpatient experiences in evaluating and managing pediatric patients with
infectious diseases. Office, clinic, and inpatient experiences in evaluating and managing
pediatric patients with infectious diseases. Interpretation and use of clinical laboratory
data.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2
semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

PHD 605  Pediatric Cardiology Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A
student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a
maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R:
Open only to graduate professional students in College of Human Medicine. R: Open to graduate-
professional students in the College of Human Medicine.
Office, clinic, and hospital experience in diagnostic and therapeutic pediatric cardiology
including special diagnostic procedures.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2
semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018
PHD 606  Pediatric Endocrinology and Metabolism Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. Clinic and hospital experience in evaluating patients with endocrine and metabolic disorders. Clinic and hospital experience in evaluating pediatric patients with endocrine and metabolic disorders. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Fall 1995 Effective Summer 2018

PHD 607  Pediatric Hematology and Oncology Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R: Open only to graduate-professional students in the College of Human Medicine. R: Open to graduate-professional students in College of Human Medicine. Clinical experience in evaluating and managing pediatric patients with common hematologic and oncologic disorders. Clinical experience in evaluating and managing pediatric patients with common hematologic and oncologic disorders. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Fall 1995 Effective Summer 2018

PHD 608  Pediatric Pulmonary Disease Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine. Inpatient and outpatient clinical experiences in evaluating and managing pediatric patients with pulmonary problems. Diagnostic procedures, clinically relevant physiology, current research. Inpatient and outpatient clinical experiences in evaluating and managing pediatric patients with pulmonary disease. Diagnostic procedures, pathobiology of pulmonary system, current research. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Fall 1995 Effective Summer 2018

PHD 609  Pediatric Genetics Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 to 12 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: PHD 600 RB: PHD 600 or HM 556 R: Open to graduate-professional students in the College of Human Medicine. Influence of genetic determinants across multiple fields of medicine. Prenatal and developmental history taking. Identification of genetically determine conditions and major and minor anomalies. Use of genetic databases. Family counseling. Selection and interpretation of genetic tests. Request the use of the Pass-No Grade (P-N) system. Request the use of ET-Extension to postpone grading. The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. Effective Fall 2009 Effective Summer 2018
DEPARTMENT OF PHYSIOLOGY

PSL 536  Basic Principles of Cell Biology and Physiology
Fall of every year. 3(2-2) Interdepartmental with Human Anatomy and Biochemistry and Molecular Biology. R: Open to graduate-professional students in the College of Osteopathic Medicine. Modern concepts of cell biology as a basis for understanding the structure (histology) and function (physiology) of human tissues in health and disease. Request the use of the Pass-No Grade (P-N) system.
DELETE COURSE
Effective Fall 2017

DEPARTMENT OF PLANT, SOIL AND MICROBIAL SCIENCES

CSS 288  Principles of Weed Management
Fall of every year. 3(2-2) P: CSS 101 or PLB 105 or BS 161 or HRT 203 or CSS 232 or LB 145 R: Open to undergraduate students or agricultural technology students. Cultural, mechanical, biological, and chemical weed management principles and practices. Environmental considerations. Field trips required. SA: CSS 402, CSS 156, CSS 302
DELETE COURSE
Effective Fall 2018

CSS 441  Plant Breeding and Biotechnology
Spring of even years. 3(3-0) Interdepartmental with Forestry and Horticulture. P: CSS 101 P: (CSS 350 or concurrently) or (IBIO 341 or concurrently) Plant improvement by genetic manipulation. Genetic variability in plants. Traditional and biotechnological means of creating and disseminating recombinant genotypes and cultivars. Importance of plant breeding to our food system, economy, and environment. Plant improvement by genetic manipulation. History of plant breeding. Traditional and biotechnological means of improving plant cultivars by genetic manipulation. Importance of plant breeding to our food system, economy, and environment.
Effective Spring 2014 Effective Spring 2018

PLP 407  Diseases and Insects of Forest and Shade Trees
Spring of every year. 4(3-3) Interdepartmental with Entomology and Plant Biology. Interdepartmental with Entomology and Forestry and Plant Biology P: (PLB 105 or BS 162 or LB 144) and Completion of Tier I Writing Requirement Diseases, insects, and environmental problems affecting trees in forests, parks, suburbs, and nurseries. Methods of control. SA: BOT 407
Effective Spring 2014 Effective Fall 2018

SCHOOL OF SOCIAL WORK

SW 801  Foundations of Social Work Practice
Summer of every year. 2(2-0) R: Open to master's students in the Master of Social Work in Clinical Social Work. Overview of the social work profession and the social welfare system.
DELETE COURSE
Effective Spring 2018
DEPARTMENT OF SURGERY

SUR 609  Otolaryngology Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
- Common otolaryngologic disorders, emergencies. Diagnosis and treatment. Primary physician's judgments about management.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effect: Fall 1995 Effective Summer 2018

SUR 610  Plastic Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
- Principles of wound healing and tissue repair. Indications and applications of plastic surgery procedures.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effect: Fall 1995 Effective Summer 2018

SUR 611  Urology Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
- Demonstration of clinical manifestations of genito-urinary disease, investigative methods and techniques of diagnosis and management. Urologic emergencies and performance of basic urologic skills.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effect: Fall 1995 Effective Summer 2018

SUR 613  Orthopedic Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 614 RB: SUR 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
- Diagnosis and management skills in common orthopedic problems. Orthopedic emergencies.
- Request the use of the Pass-No Grade (P-N) system.
- Request the use of ET-Extension to postpone grading.
- The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effect: Fall 1995 Effective Summer 2018
SUR 614  Neurosurgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608. RB: SUR 608 or HM 556. R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Problems related to common emergent and elective neurosurgery involving the brain, spine, and peripheral nerves. Neurological examinations, diagnostic methods.

Request the use of the Pass-No Grade (P-N) system.

Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.

Effective Fall 1994 Effective Summer 2018

SUR 615  Ophthalmology Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556. R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Medical and surgical treatment of eye diseases. Clinical experiences include private office practice, surgical observations, pre-and post-operative care.

Request the use of the Pass-No Grade (P-N) system.

Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.

Effective Fall 1995 Effective Summer 2018

SUR 616  Thoracic Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556. R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.

Problem solving in thoracic medicine and surgery. Pulmonary physiology. Diagnostic tools and tests, and indications for surgical procedures.

Request the use of the Pass-No Grade (P-N) system.

Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.

Effective Fall 1995 Effective Summer 2018

SUR 617  Trauma Critical Care Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. P: SUR 608. P: SUR 608 or HM 556. R: Open to graduate-professional students in the College of Human Medicine.

Focused experience in trauma and critical care as part of a surgical team at a Level One Trauma Center.

Request the use of the Pass-No Grade (P-N) system.

Request the use of ET-Extension to postpone grading.

The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.

Effective Summer 2006 Effective Summer 2018
SUR 618  Anesthesia Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

SUR 619  Sub-specialty Surgery Clerkship
Fall of every year. Spring of every year. Summer of every year. 6 credits. 3 to 6 credits. A student may earn a maximum of 18 credits in all enrollments for this course. A student may earn a maximum of 24 credits in all enrollments for this course. RB: SUR 608 RB: SUR 608 or HM 556 R: Open only to graduate-professional students in College of Human Medicine. R: Open to graduate-professional students in the College of Human Medicine.
Surgical domains not covered otherwise or in which students desire further exposure. Surgical domains not covered in other clerkship experiences in which students desire further exposure.
Request the use of the Pass-No Grade (P-N) system.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 1995 Effective Summer 2018

COLLEGE OF VETERINARY MEDICINE

VM 513  Ethical and Animal Welfare Issues in the Veterinary Profession
Fall of every year. Spring of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine. Identifying and communicating ethical challenges and animal welfare issues in the veterinary profession.
Effective Spring 2017 Effective Fall 2018

VM 514  Comparative Lifestage Nutrition
Fall of every year. Spring of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine. Nutritional assessment and management of the physiological stages of growth. Adult maintenance, gestation, lactation, performance, and geriatric concerns of common domestic species.
Effective Fall 2017 Effective Spring 2018

VM 826  Creating a Food Safety Culture
Summer of odd years. 3(3-0) RB: Professional or graduate status with knowledge of food safety. R: Open to graduate students in the Food Safety Major or approval of college. R: Open to graduate students in the College of Veterinary Medicine or in the Department of Large Animal Clinical Sciences or in the Food Safety Major or approval of college.
Explores proven, evidence-based ways to change or strengthen the food safety culture of an organization and influence employee behavior.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Summer 2016 Effective Summer 2017
VM 834  Current Issues in Food Safety  
Fall of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. 
R: Open to graduate students in the College of Veterinary Medicine or in the Food Safety Major or approval of department. 
R: Open to graduate students in the College of Veterinary Medicine or in the Department of Large Animal Clinical Sciences or in the Food Safety Major or approval of college. 
Current issues in food safety including: allergen control in the manufacturing setting, microbial control in the manufacturing setting, good manufacturing practices, ingredient safety, preventative control, produce food safety. Other topics as needed. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
Effective Summer 2016 Effective Fall 2017

VM 836  Food Safety Issues by Commodity  
Spring of every year. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. 
R: Open to graduate students in the College of Veterinary Medicine or approval of department. 
R: Open to graduate students in the College of Veterinary Medicine or in the Food Safety Major or approval of college. 
Food safety issues specific to different commodity groups or segments of food industry including meat safety, dairy safety, beverage safety, pet food safety, ingredient safety, and food waste recovery. 
Request the use of ET-Extension to postpone grading. 
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. 
Effective Spring 2017 Effective Spring 2018