Code # Enter text…

**Course Revision Proposal Form**

**[x] Undergraduate Curriculum Council**

**[ ] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

Email completed proposals to [curriculum@astate.edu](mailto:curriculum@astate.edu) for inclusion in curriculum committee agenda.

|  |  |
| --- | --- |
| John Hershberger 9/29/2017 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| William Burns 9/29/2017 **Department Chair:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (If applicable)** |
| David F. Gilmore 9/29/2017 **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Anne A. Grippo 10/3/2017 **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |

1. Contact Person (Name, Email Address, Phone Number)

William Burns, [wburns@asate.edu](mailto:wburns@asate.edu) 870-972-3086

2. Proposed Starting Term and Bulletin Year for Change to Take Effect

Spring 2018

3. Current Course Prefix and Number

CHEM 1043 and CHEM 1041

3.1 – [Yes] Request for Course Prefix and Number change

If yes, include new course Prefix and Number below. *(Confirm that number chosen has not been used before. For variable credit courses, indicate variable range. Proposed number for experimental course is 9. )*

Replace CHEM 1043 and CHEM 1041 with CHEM 1044

3.2 – If yes, has it been confirmed that this course number is available for use? YES

*If no: Contact Registrar’s Office for assistance.*

4. Current Course Title

Fundamental Concepts of Chemistry (CHEM 1043) and Fundamental Concepts of Chemistry Laboratory (CHEM 1041)

4.1 – [Yes] Request for Course Title Change

If yes, include new Course Title Below. *If title is more than 30 characters (including spaces), provide short title to be used on transcripts. Title cannot have any symbols (e.g. slash, colon, semi-colon, apostrophe, dash, and parenthesis). Please indicate if this course will have variable titles (e.g. independent study, thesis, special topics).*

Fundamental Concepts of Chemistry (short: Fund Conc Chem)

5. – [Yes ] Request for Course Description Change.

If yes, please include brief course description (40 words or fewer) as it should appear in the bulletin.

An integrated lecture/laboratory chemistry survey course introducing selected fundamental concepts, including dimensional analysis, mole concept, atomic and molecular structure, nomenclature, chemical reactions, thermochemistry, intermolecular inter­actions, gases, mixtures, kinetics, equilibrium and acid base chemistry.

6. – [Yes ] Request for prerequisites and major restrictions change.

*(If yes, indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).*

1. Are there any prerequisites? Yes
   1. If yes, which ones?

The proposed prerequisite for CHEM 1044 is successful completion of a 1000-level math course or 19 or above on ACT Math or 460 or above on SAT Mathematics or 36 or above on COMPASS Algebra or 42 or above on ASSET Algebra or completion of 12 modules in UC 0173 and UC 022V.

* 1. Why or why not?

Several test prerequisite options are included to accommodate as many students as possible. These prerequisites are similar to those of MATH 1043 (Quantitative Reasoning), which has the least rigorous prerequisites of an A-State math course that will be accepted for degree credit.

1. Is this course restricted to a specific major? No
   1. If yes, which major? Enter text...

7. – [Yes ] Request for Course Frequency Change(e.g. Fall, Spring, Summer). *Not applicable to Graduate courses.*

a. If yes, please indicate new frequency:

Fall, Spring

8. – [Yes ] Request for Class Mode Change

*If yes, indicate if this course will be lecture only, lab only, lecture and lab, activity, dissertation, experiential learning, independent study, internship, performance, practicum, recitation, seminar, special problems, special topics, studio, student exchange, occupational learning credit, or course for fee purpose only (e.g. an exam)? Please choose one.*

CHEM 1044 will be a lecture and lab course

9. – [No ] Request for grade type change

*If yes, what is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])*

Enter text...

10. Is this course dual listed (undergraduate/graduate)? No

a. If yes, indicate course prefix, number and title of dual listed course.

Enter text...

11. Is this course cross listed? No

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross listed course.)*

1. If yes, please list the prefix and course number of cross listed course.

Enter text...

1. Are these courses offered for equivalent credit? Yes / No

Please explain. Enter text...

12. Is this course change in support of a new program? No

a. If yes, what program?

Enter text...

13. Does this course replace a course being deleted? Yes

a. If yes, what course?

CHEM 1043 and CHEM 1041.

14. Will this course be equivalent to a deleted course or the previous version of the course? Yes

a. If yes, which course?

CHEM 1043 and CHEM 1041

15. Does this course affect another program? Yes

If yes, provide contact information from the Dean, Department Head, and/or Program Director whose area this affects.

This is a General Education course

BS Agriculture, Major in Agricultural Studies, Emphasis Agricultural Systems Technology: requires only CHEM 1043

ANSC 4763: prerequisites include CHEM 1013 or CHEM 1043.

PSSC 2813: prerequisite CHEM 1013 or CHEM 1043.

PSSC 3323: prerequisites include CHEM 1013 or CHEM 1043

Tim Burcham [tburcham@astate.edu](mailto:tburcham@astate.edu) Donald Kennedy [dkennedy@astate.edu](mailto:dkennedy@astate.edu)

16. Does this course require course fees? No

*If yes: Please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Revision Details**

17. Please outline the proposed revisions to the course.

*Include information as to any changes to course outline, special features, required resources, or in academic rationale and goals for the course.*

It is proposed the existing three credit Fundamental Concepts of Chemistry lecture (CHEM 1043) and one credit Fundamental Concepts of Chemistry Laboratory (CHEM 1041) courses be combined into a single lecture/laboratory course, Fundamental Concepts of Chemistry (CHEM 1044). The only change to course outline will be the incorporation of existing lecture and laboratory content into the single proposed course. No additional resources will be needed to deliver the course. Based on current integrated lecture/lab physical science courses, it is expected lab activities will contribute 20-25% to the course grade determination.

18. Please provide justification to the proposed changes to the course.

Current and past bulletins indicate CHEM 1043 and 1041 are to be taken concurrently. It is also worth noting the general education curriculum indicates matched physical science lecture and laboratory courses must be completed (i.e. PHSC 1203 AND PHSC 1201, or PHYS 1103 AND PHYS 1101, or CHEM 1043 AND CHEM 1041). There has been an increasing number of students taking unmatched physical science lecture and laboratory courses (i.e. PHSC 1203 and CHEM 1041) and subsequently being told this does not fulfill the general education physical science requirement. In an effort to ameliorate this issue, it is proposed CHEM 1044 (lecture and lab course) replace CHEM 1043 (lecture) and CHEM 1041 (lab). PHSC 1014 (Energy and the Environment), PHYS 2034 (University Physics I), and PHYS 2054 (General Physics I) are offered as successful precedents for unified lecture/laboratory general education courses.

19. Do these revisions result in a change to the assessment plan?

[No]

*\*If yes: Please complete the Assessment section of the proposal on the next page.*

*\*If no: Skip to Bulletin Changes section of the proposal.*

***\*See question 19 before completing the Assessment portion of this proposal.***

**Assessment**

**University Outcomes**

20. Please indicate the university-level student learning outcomes for which this new course will contribute. Check all that apply.

|  |  |  |
| --- | --- | --- |
| * 1. **[ ]** Global Awareness | * 1. **[ ]** Thinking Critically | * 1. **[ ]** Information Literacy |

**Relationship with Current Program-Level Assessment Process**

21. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

Enter text...

22. Considering the indicated program-level learning outcome/s (from question #23), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

|  |  |
| --- | --- |
| **Program-Level Outcome 1 (from question #23)** | Type outcome here. What do you want students to think, know, or do when they have completed the course? |
| Assessment Measure | Please include direct and indirect assessment measure for outcome. |
| Assessment  Timetable | What semesters, and how often, is the outcome assessed? |
| Who is responsible for assessing and reporting on the results? | Who (person, position title, or internal committee) is responsible for assessing, evaluating, and analyzing results, and developing action plans? |

*(Repeat if this new course will support additional program-level outcomes)*

**Course-Level Outcomes**

23. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

|  |  |
| --- | --- |
| **Outcome 1** | Type outcome here. What do you want students to think, know, or do when they have completed the course? |
| Which learning activities are responsible for this outcome? | List learning activities. |
| Assessment Measure | What will be your assessment measure for this outcome? |

*(Repeat if needed for additional outcomes)*

**Bulletin Changes**

|  |
| --- |
| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Follow the following guidelines for indicating necessary changes.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  - Deleted courses/credit hours should be marked with a red strike-through (~~red strikethrough~~)  - New credit hours and text changes should be listed in blue using enlarged font (blue using enlarged font).  - Any new courses should be listed in blue bold italics using enlarged font (***blue bold italics using enlarged font***)  *You can easily apply any of these changes by selecting the example text in the instructions above, double-clicking the ‘format painter’ icon 🡪 , and selecting the text you would like to apply the change to.*  *Please visit* [*https://youtu.be/yjdL2n4lZm4*](https://youtu.be/yjdL2n4lZm4) *for more detailed instructions.* |

Pages 84, 85, 86, 105, 106, 107, 108, 110, 111, 112, 113, 115, 116, 342, 344, 346, 348, 355, 420, 422, 559 of the 2017-2018 Arkansas State University Undergraduate Bulletin

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L EDUCATION CURRICULUM

FOR BACCAL SSOCIATE OF SCIENCE DEGREES

|  |  |
| --- | --- |
| **Communication:**  *Six (6) hours required*  *Three (3) hours optional (see Departmental Option below)* | **Required Credit Hrs.** |
| COMS 1203, Oral Communication ENG 1003, Composition I (*required)* ENG 1013, Composition II (*required)* | 6 |
| **Math:**  *Three (3) hours required;*  *MATH 1023 - College Algebra is a requirement for certain degrees which will not be satisfied by MATH 1043 - Quantitative Reasoning* | **Required Credit Hrs.** |
| MATH 1023, College Algebra  MATH 1043, Quantitative Reasoning  Any MATH course that requires MATH 1023 as a prerequisite. | 3 |
| **Science:**  *Eight (8) hours required* | **Required Credit Hrs.** |
| **Physical Science - *Four (4) hours required***  CHEM 1013 **AND** 1011, General Chemistry I and Laboratory  ~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry and Laboratory~~  **CHEM 1044 Fundamental Concepts of Chemistry**  GEOL 1003 **AND** 1001, Environmental Geology and Laboratory  PHSC 1014, Energy and the Environment  PHSC 1203 **AND** 1201, Physical Science and Laboratory PHYS 1103 **AND** 1101, Intro to Space Science and Laboratory PHYS 2034, University Physics I  PHYS 2054, General Physics I | 4 |
| **Life Science - *Four (4) hours required***  BIOL 1003 **AND** 1001, Biological Science and Laboratory BIOL 1033 **AND** 1001, Biology of Sex and Laboratory  BIOL 1063 **AND** 1001, People & Environment and Laboratory BIO 2013 **AND** 2011, Biology of the Cell and Laboratory  BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy and Physiology I and Laboratory | 4 |
| **Fine Arts & Humanities:**  *Six (6) hours required*  *Three (3) hours optional (see Departmental Option below)* | **Required Credit Hrs.** |
| **Fine Arts - *Three (3) hours required***  ART 2503 Fine Arts – Visual MUS 2503 Fine Arts – Music THEA 2503 Fine Arts - Theatre | 3 |
| **Humanities - *Three (3) hours required***  ENG 2003, World Literature to 1660  ENG 2013, World Literature Since 1660 PHIL 1103, Introduction to Philosophy | 3 |
| **Social Sciences:**  *Nine (9) hours required* ***(****One course must be selected from HIST 2763, HIST 2773 or POSC 2103) Three (3) hours optional (see Departmental Option below)* | **Required Credit Hrs.** |
| ANTH 2233, Introduction to Cultural Anthropology HIST 2763, United States History to 1876 CMAC 1003, Mass Communication HIST 2773, United States History since 1876 ECON 2313, Principles of Macroeconomics POSC 1003, Introduction to Politics  ECON 2333, Economic Issues & Concepts POSC 2103, Introduction to US Government GEOG 2613, Introduction to Geography PSY 2013, Introduction to Psychology  HIST 1013, World Civilization to 1660 SOC 2213, Introduction to Sociology HIST 1023, World Civilization since 1660 | 9 |
| **Departmental Option:**  *Three (3) hours* | **Required Credit Hrs.** |
| *The three (3) optional hours are chosen by the Department for the Degree plan and not the individual student. The three (3) hours will be from either Communication, Fine Arts & Humanities, or Social Sciences.* | **3** |
| **Total Required Hours:** | **35** |

NOTE: ty Requirement and is in addition to the State 5 general education hours.

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GENERAL EDUCATION CURRICULUM

FOR ASSOCIATE OF APPLIED SCIENCE DEGREES

|  |  |
| --- | --- |
| **Composition:** | **Required Credit Hrs.** |
| ENG 1003, Composition I (*required)* ENG 1013, Composition II (*required)* | 6 |
| **Natural Sciences and Mathematics:**  Students may substitute a higher level biology course and its laboratory for which BIOL 1003 and 1001 are prerequisites, or may substitute BIO 2013 and 2011. | **Required Credit Hrs.** |
| MATH 1023, College Algebra  Any MATH course that requires MATH 1023 as a prerequisite. | 3 |
| **Select one of the following:**  BIOL 1003 **AND** 1001, Biological Science and Laboratory BIOL 1033 **AND** 1001, Biology of Sex and Laboratory  BIOL 1063 **AND** 1001, People & Environment and Laboratory BIO 2013 **AND** 2011, Biology of the Cell and Laboratory  BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy and Physiology I and Laboratory  CHEM 1013 AND 1011, General Chemistry I and Laboratory  ~~CHEM 1043 AND 1041, Fundamental Concepts of Chemistry and Laboratory~~  **CHEM 1044 Fundamental Concepts of Chemistry**  GEOL 1003 AND 1001, Environmental Geology and Laboratory  PHSC 1014, Energy and the Environment  PHSC 1203 AND 1201, Physical Science and Laboratory  PHYS 1103 AND 1101, Introduction to Space Science and Laboratory PHYS 2034, University Physics I  PHYS 2054, General Physics I  PHYS 2073 AND 2071, Fundamental Physics and Laboratory | 4 |
| **Social Sciences:** | **Required Credit Hrs.** |
| **Select one of the following:**  HIST 2763, The United States To 1876 HIST 2773, The United States Since 1876  POSC 2103, Introduction to United States Government | 3 |
| **Computer Applications/Fundamentals:** | **Required Credit Hrs.** |
| **Select one of the following:**  CIT 1503, Microcomputer Applications CS 1013, Introduction to Computers | 3 |
| **Total Required Hours:** | **19** |

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GENERAL EDUCATION CURRICULUM

FOR ASSOCIATE OF GENERAL STUDIES DEGREES

|  |  |
| --- | --- |
| **Composition:**  *Six (6) hours required* | **Required Credit Hrs.** |
| ENG 1003, Composition I (*required)* ENG 1013, Composition II (*required)* | 6 |
| **Natural Sciences and Mathematics:**  *Three (3) hours required*  MATH 1023 - College Algebra is a requirement for certain degrees which will not be satisfied by MATH 1043 - Quantitative Reasoning  Students may substitute a higher level biology course and its laboratory for which BIOL 1003 and 1001  are prerequisites. | **Required Credit Hrs.** |
| MATH 1023, College Algebra  MATH 1043, Quantitative Reasoning  Any MATH course that requires MATH 1023 as a prerequisite. | 3 |
| **Select one of the following:**  BIOL 1003 **AND** 1001, Biological Science and Laboratory BIOL 1033 **AND** 1001, Biology of Sex and Laboratory  BIOL 1063 **AND** 1001, People & Environment and Laboratory BIO 2013 **AND** 2011, Biology of the Cell and Laboratory  BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy and Physiology I and Laboratory  CHEM 1013 **AND** 1011, General Chemistry I and Laboratory  ~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry and Laboratory~~  **CHEM 1044 Fundamental Concepts of Chemistry**  GEOL 1003 **AND** 1001, Environmental Geology and Laboratory  PHSC 1014, Energy and the Environment  PHSC 1203 **AND** 1201, Physical Science and Laboratory  PHYS 1103 **AND** 1101, Introduction to Space Science and Laboratory PHYS 2034, University Physics I  PHYS 2054, General Physics I  PHYS 2073 **AND** 2071, Fundamental Physics and Laboratory | 4 |
| **Arts and Humanities:**  *Three (3) hours required* | **Required Credit Hrs.** |
| **Select one of the following:**  ART 2503, Fine Arts-Visual  ENG 2003, World Literature to 1660  ENG 2013, World Literature Since 1660 MUS 2503, Fine Arts-Music  PHIL 1103, Introduction to Philosophy THEA 2503, Fine Arts-Theatre | 3 |
| **Social Sciences:**  *Six (6) hours required* ***(****One course must be selected from HIST 2763, HIST 2773 or POSC 2103)* | **Required Credit Hrs.** |
| ANTH 2233, Introduction to Cultural Anthropology HIST 2763, United States History to 1876 CMAC 1003, Mass Communication HIST 2773, United States History since 1876 ECON 2313, Principles of Macroeconomics POSC 1003, Introduction to Politics  ECON 2333, Economic Issues & Concepts POSC 2103, Introduction to US Government GEOG 2613, Introduction to Geography PSY 2013, Introduction to Psychology  HIST 1013, World Civilization to 1660 SOC 2213, Introduction to Sociology HIST 1023, World Civilization since 1660 | 6 |
| **Computer Applications/Fundamentals:** | **Required Credit Hrs.** |
| **Select one of the following:**  CIT 1503, Microcomputer Applications CS 1013, Introduction to Computers | 3 |
| **Total Required Hours:** | **25** |

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**Major in Agricultural Business**

**Bachelor of Science in Agriculture Emphasis in Agricultural Economics and Finance**

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84) |  |

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

**Students with this major must take the following:**

*MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013* ***AND*** *1011, General Chemistry I and Laboratory* ***OR***

**CHEM 1044 Fundamental Concepts of Chemistry**

*~~CHEM 1043~~* ***~~AND~~*** *~~CHEM 1041, Fundamental Concepts of Chemistry and Laboratory~~*

*ECON 2313, Principles of Macroeconomics*

*COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*

|  |  |
| --- | --- |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| ACCT 2033, Introduction to Financial Accounting | 3 |
| ACCT 2133, Introduction to Managerial Accounting | 3 |
| AGEC 3053, Commodity Futures Markets | 3 |
| AGEC 4033, Agricultural Law **OR**  LAW 2023, Legal Environment of Business | 3 |
| AGEC 4053, Agricultural Finance | 3 |
| AGEC 4073, Agricultural Business Management | 3 |
| AGEC 4083, Agricultural Policy and Current Issues | 3 |
| CIT 1503, Microcomputer Applications **OR**  CS 1013, Introduction to Computers | 3 |
| ECON 2323, Principles of Microeconomics | 3 |
| MGMT 3123 Principles of Management **OR**  MGMT 3153, Organizational Behavior | 3 |
| MKTG 3013, Marketing | 3 |
| **Sub-total** | **33** |
| **Emphasis Area (Agricultural Economics and Finance):**  Student may select from one of the career specialty areas or consult an advisor and design a program  to meet the student’s particular career goals. | **Sem. Hrs.** |
| CIT 3523, Operations Management | 3 |
| ECON 3313, Microeconomic Analysis | 3 |
| ECON 3323, Money and Banking | 3 |
| ECON 3353, Macroeconomic Analysis | 3 |
| FIN 3713, Business Finance | 3 |
| FIN 3763, Financial Institutions and Markets | 3 |
| MATH 2143, Business Calculus | 3 |
| **Sub-total** | **21** |
| **Electives:** | **Sem. Hrs.** |
| Electives | **10** |
| **Total Required Hours:** | **120** |

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**Major in Agricultural Business**

**Bachelor of Science in Agriculture Emphasis in Agricultural Marketing and Management**

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84)  **Students with this major must take the following:**  *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013* ***AND*** *1011, General Chemistry I and Laboratory* ***OR***  *~~CHEM 1043~~* ***~~AND~~*** *~~CHEM 1041, Fundamental Concepts of Chemistry and Laboratory~~*  **CHEM 1044 Fundamental Concepts of Chemistry**  *ECON 2313, Principles of Macroeconomics*  *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)* | **35** |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| ACCT 2033, Introduction to Financial Accounting | 3 |
| ACCT 2133, Introduction to Managerial Accounting | 3 |
| AGEC 3053, Commodity Futures Markets | 3 |
| AGEC 4033, Agricultural Law **OR**  LAW 2023, Legal Environment of Business | 3 |
| AGEC 4053, Agricultural Finance | 3 |
| AGEC 4073, Agricultural Business Management | 3 |
| AGEC 4083, Agricultural Policy and Current Issues | 3 |
| CIT 1503, Microcomputer Applications **OR**  CS 1013, Introduction to Computers | 3 |
| ECON 2323, Principles of Microeconomics | 3 |
| MGMT 3153, Organizational Behavior **OR**  MGMT 3123 Principles of Management | 3 |
| MKTG 3013, Marketing | 3 |
| **Sub-total** | **33** |
| **Emphasis Area (Agricultural Marketing and Management):**  Student may select from one of the career specialty areas or consult an advisor and design a pro-  gram to meet the student’s particular career goals. | **Sem. Hrs.** |
| AGEC 3003, Agricultural Marketing | 3 |
| AGEC 3013, Agricultural Records | 3 |
| AGEC 3063, Agricultural Sales and Services | 3 |
| AGEC 4013, Farm Appraisal | 3 |
| AGEC 4023, International Commodity Marketing | 3 |
| AGEC 4043, Land Economics | 3 |
| **Sub-total** | **18** |
| **Electives:** | **Sem. Hrs.** |
| Electives | **13** |
| **Total Required Hours:** | **120** |

*The bulletin can be accessed at* [*http://www.astate.edu/a/registrar/students/*](http://www.astate.edu/a/registrar/students/)

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**Major in Agricultural Studies**

**Bachelor of Science in Agriculture Emphasis in Agricultural Science**

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84)  **Students with this major must take the following:**  *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite ~~CHEM 1043~~* ***~~AND~~*** *~~CHEM 1041, Fundamental Concepts of Chemistry and Laboratory~~*  **CHEM 1044 Fundamental Concepts of Chemistry**  *BIOL 1003* ***AND*** *BIOL 1001, Biological Science and Laboratory*  *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)* | **35** |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| See emphasis area below. |  |
| **Emphasis Area (Agricultural Science):** | **Sem. Hrs** |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry | 2 |
| Electives from AGEC, AGED, ANSC, AGRI, PSSC/HORT, TECH  *No more than 12 hours in one area.* | 44 |
| **Sub-total** | **46** |
| **Minor:** | **Sem. Hrs** |
| Minor must be approved by advisor and should not include courses taken to fulfill general education  requirements. | **18** |
| **Total Required Hours:** | **120** |

*The bulletin can be accessed at* [*http://www.astate.edu/a/registrar/students/*](http://www.astate.edu/a/registrar/students/)

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*The bulletin can be accessed at* [*http://www.astate.edu/a/registrar/students/*](http://www.astate.edu/a/registrar/students/)

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**Major in Agricultural Studies**

**Bachelor of Science in Agriculture Emphasis in Agricultural Communications**

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84) |  |

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

**Students with this major must take the following:**

*MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite BIOL 1003* ***AND*** *BIOL 1001, Biological Science and Laboratory*

*CHEM 1013,* ***AND*** *CHEM 1011, General Chemistry I and Laboratory* ***OR***

*~~CHEM 1043~~* ***~~AND~~*** *~~CHEM 1041, Fundamental Concepts of Chemistry and Laboratory~~*

**CHEM 1044 Fundamental Concepts of Chemistry**

*CMAC 1003, Mass Communications in Modern Society*

*ECON 2313, Principles of Macroeconomics* ***OR***

*ECON 2333, Economic Issues and Concepts*

|  |  |
| --- | --- |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| See emphasis area below. | **-** |
| **Emphasis Area (Agricultural Communications:)** | **Sem. Hrs** |
| AD 3023, Principles of Advertising **OR**  PR 3003, Principles of Public Relations | 3 |
| AGEC 3063, Agricultural Sales and Services | 3 |
| AGEC 4083, Agricultural Policy and Current Issues | 3 |
| AGED 1411, Introduction to Agricultural and Extension Education | 1 |
| AGED 3443, Leadership in Agriculture | 3 |
| AGED 445V, Practicum in Agricultural Communications | 3 |
| AGED 4462, Agricultural Youth Organizations | 2 |
| AGRI 420V, Internships in Agriculture | 3 |
| AGRI 4433, Organic Agricultural Production | 3 |
| AGRI 4223, Agriculture and the Environment | 3 |
| AGST 1003, Modern Agricultural Systems | 3 |
| AGST 3543, Fundamentals of GIS/GPS | 3 |
| CMAC 1001, Media Grammar and Style | 1 |
| CMAC 2003, Media Writing | 3 |
| CMAC 2053, Introduction to Visual Communications | 3 |
| ENG 3043, Technical Writing **OR**  MDIA 4053, Advanced Reporting | 3 |
| MDIA 2013 **AND** MDIA 2010, Multimedia Reporting Laboratory | 3 |
| MDIA 2313, Multimedia Production | 3 |

*COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*

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**Major in Agricultural Studies**

**Bachelor of Science in Agriculture Emphasis in Agricultural Education**

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84) |  |

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

**Students with this major must take the following:**

*MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013* ***AND*** *CHEM 1011, General Chemistry I and Laboratory* ***OR***

*~~CHEM 1043~~* ***~~AND~~*** *~~CHEM 1041, Fundamental Concepts of Chemistry and Laboratory~~*

**CHEM 1044 Fundamental Concepts of Chemistry**

*BIOL 1003* ***AND*** *BIOL 1001, Biological Science and Laboratory*

*COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*

|  |  |
| --- | --- |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| See emphasis area below. |  |
| **Emphasis Area (Agricultural Education):** | **Sem. Hrs** |
| ANSC 1621, Introduction to Animal Science Laboratory | 1 |
| PSSC 2811, Soils Lab | 1 |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry | 2 |
| **Select three of the following:**  AGED 2433, Principles of Agricultural Power: Electricity and Internal Combustion Engines AGED 2453, Application of Welding Technologies to Agriculture  AGED 3433, Agricultural Equipment Hydraulic Systems AGED 3453, Agricultural Structural Systems | 9 |
| Electives in AGRI, AGEC, AGED, ANSC, HORT, PSSC, or TECH  *(12 hours must be upper-level and all electives must be approved by advisor)* | 18 |
| **Sub-total** | **31** |
| **Professional Education Requirements:**  Grade of “C” or better required for all Professional Education Requirements.  Courses denoted below with an asterisk (\*) require admission to the Teacher Education Program. For additional information, see Professional Education Requirements for Secondary Majors in the College of Education and Behavioral Science section. | **Sem. Hrs** |
| AGED 1403, Basic Agricultural Mechanics | 3 |
| AGED 1411, Introduction to Agricultural and Extension Education | 1 |
| AGED 4433, Methods of Teaching Agricultural Mechanics | 3 |
| AGED 4462, Agricultural Youth Organizations | 2 |
| SCED 2513 Introduction to Secondary Teaching | 3 |
| VOED 4503, Foundations of Adult Education in Vocational Education | 3 |
| PSY, 3703, Educational Psychology | 3 |
| \*EDAG 4623, Special methods for Teaching Agricultural Education | 3 |
| \*TIAG 4826, Teaching Internship in the Secondary School | 12 |
| **Sub-total** | **33** |
| **Total Required Hours:** | **120** |

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**Major in Agricultural Studies**

**Bachelor of Science in Agriculture Emphasis in Agricultural Systems Technology**

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84)  **Students with this major must take the following:**  *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite PHYS 2054, General Physics I*  *BIOL 1003* ***AND*** *BIOL 1001, Biological Science and Laboratory*  *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)* | **35** |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| See emphasis area below. |  |
| **Emphasis Area (Agricultural Systems Technology):** | **Sem. Hrs** |
| AGEC 3003, Agricultural Marketing **OR** AGEC 3013, Agricultural Records **OR** AGEC 3063, Agricultural Sales and Service | 3 |
| AGED 3433, Agricultural Equipment Hydraulic Systems | 3 |
| AGRI 4223, Agriculture and the Environment | 3 |
| AGST 1003, Modern Agricultural Systems | 3 |
| AGST 2003, Intro to Ag Systems Technology **OR**  TECH 2863, Principles of Technology | 3 |
| AGST 3503, Agricultural Spatial Technologies I | 3 |
| AGST 3513, Agricultural Spatial Technologies II | 3 |
| AGST 3543, Fundamentals of GIS/GPS | 3 |
| AGST 4003, Modern Irrigation Systems | 3 |
| AGST 4013, Precision Application Technology | 3 |
| AGST 4543, Advanced GIS for Agriculture and Natural Resources | 3 |
| AGST 4773, Remote Sensing | 3 |
| CHEM 1043, Fundamental Concepts of Chemistry  **CHEM 1044 Fundamental Concepts of Chemistry** | ~~3~~ **4** |
| MATH 1033, Plane Trigonometry | 3 |
| PHYS 2064, General Physics II | 4 |
| PSSC 3323, Weeds and Weed Control **OR**  PSSC 4713, Soil Quality Assessment and Interpretation **OR**  PSSC 4853, Soil and Water Conservation | 3 |
| TECH 3803, Electrical Systems | 3 |
| TECH 3863, Industrial Safety | 3 |
| TECH 4813, Operations Systems Research | 3 |
| Upper-level electives in AGST, AGRI, PSSC | 6 |
| **Sub-total** | **64** |
| **Total Required Hours:** | **120 121** |

*The bulletin can be accessed at* [*http://www.astate.edu/a/registrar/students/*](http://www.astate.edu/a/registrar/students/)

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**Major in Animal Science**

**Bachelor of Science in Agriculture Emphasis in Equine Management**

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84)  **Students with this major must take the following:**  *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013* ***AND*** *1011, General Chemistry I and Laboratory* ***OR***  *~~CHEM 1043~~* ***~~AND~~*** *~~1041, Fundamental Concepts of Chemistry and Laboratory~~*  **CHEM 1044 Fundamental Concepts of Chemistry**  *ECON 2313, Principles of Macroeconomics* ***OR***  *ECON 2333, Economic issues and Concepts*  *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)* | **35** |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| AGRI 2213, Genetic Improvement of Plants and Animals **OR**  BIO 3013, Genetics | 3 |
| ANSC 1621, Introduction to Animal Science Laboratory | 1 |
| ANSC 3613, Nutritional Management of Domestic Animals | 3 |
| ANSC 3633, Veterinary Anatomy and Physiology | 3 |
| BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory | 4 |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry **OR**  CHEM 1023 **AND** 1021, General Chemistry II and Laboratory | 2 or 4 |
| Animal Science (ANSC) Upper-level Electives | 12 |
| **Sub-total** | **28 or 30** |
| **Emphasis Area (Equine Management):** | **Sem. Hrs.** |
| AGEC 4073, Agricultural Business Management | 3 |
| ANSC 1522, Beginning English Equitation | 2 |
| ANSC 1602, Equitation | 2 |
| ANSC 1612, Intermediate Western Equitation | 2 |
| ANSC 2623, Equine Care and Management | 3 |
| ANSC 4613 Horse Production | 3 |
| ANSC 4743, Equine Nutrition | 3 |
| **Sub-total** | **18** |
| **Additional Support Courses:** | **Sem. Hrs.** |
| Upper-level Support Courses (AGEC, AGED, ANSC, BIO, CHEM, PSSC) | **9** |
| **Electives:** | **Sem. Hrs.** |
| Electives | **7 or 9** |
| **Total Required Hours:** | **120** |

*The bulletin can be accessed at* [*http://www.astate.edu/a/registrar/students/*](http://www.astate.edu/a/registrar/students/)

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*The bulletin can be accessed at* [*http://www.astate.edu/a/registrar/students/*](http://www.astate.edu/a/registrar/students/)

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**Major in Animal Science**

**Bachelor of Science in Agriculture Emphasis in Production and Management**

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84) |  |

A complete 8-semester degree plan is available [at http://registrar.astate.edu/.](http://registrar.astate.edu/)

**Students with this major must take the following:**

*MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite CHEM 1013* ***AND*** *1011, General Chemistry I and Laboratory* ***OR***

*~~CHEM 1043~~* ***~~AND~~*** *~~1041, Fundamental Concepts of Chemistry and Laboratory~~*

**CHEM 1044 Fundamental Concepts of Chemistry**

*ECON 2313, Principles of Macroeconomics* ***OR***

*ECON 2333, Economic issues and Concepts*

|  |  |
| --- | --- |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| AGRI 2213, Genetic Improvement of Plants and Animals **OR**  BIO 3013, Genetics | 3 |
| ANSC 1621, Introduction to Animal Science Laboratory | 1 |
| ANSC 3613, Nutritional Management of Domestic Animals | 3 |
| ANSC 3633, Veterinary Anatomy and Physiology | 3 |
| BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory | 4 |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry **OR**  CHEM 1023 **AND** 1021, General Chemistry II and Laboratory | 2 or 4 |
| Animal Science (ANSC) Upper-level Electives | 12 |
| **Sub-total** | **28 or 30** |
| **Emphasis Area (Production and Management):** | **Sem. Hrs.** |
| AGEC 4073, Agricultural Business Management | 3 |
| ANSC 3703, Poultry Flock Management | 3 |
| ANSC 4663, Principles of Breeding | 3 |
| ANSC 4673, Digestive Physiology and Nutrition of Animals | 3 |
| ANSC 4683, Reproductive Physiology | 3 |
| **Sub-total** | **15** |
| **Additional Support Courses:** | **Sem. Hrs.** |
| Upper-level Support Courses (AGEC, AGED, ANSC, BIO, CHEM, PSSC) | **6** |
| **Electives:** | **Sem. Hrs.** |
| Electives | **13 or 15** |
| **Total Required Hours:** | **120** |

*COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*

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***Major in Plant and Soil Science***

***Bachelor of Science in Agriculture Emphasis in Agronomy***

*A complete 8-semester degree plan is available* [*at http://registrar.astate.edu/.*](http://registrar.astate.edu/)

***Students with this major must take the following:***

MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite

~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry and Lab~~

**CHEM 1044 Fundamental Concepts of Chemistry**

BIOL 1003 **AND** 1001, Biological Sciences and Laboratory

COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)

|  |  |
| --- | --- |
| **College of Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| AGEC 3013, Agricultural Records **OR**  CIT 1503, Microcomputer Applications | 3 |
| AGRI 2213, Genetic Improvement of Plants and Animals | 3 |
| AGRI 4223, Agriculture and the Environment | 3 |
| BIO 3303 **AND** 3301, General Entomology and Laboratory **OR**  BIO 3313 **AND** 3311, Economic Entomology and Laboratory | 4 |
| PSSC 3313, Plant Disease Management | 3 |
| PSSC 2811, Soils Laboratory | 1 |
| PSSC 1301, Plant Science Laboratory | 1 |
| PSSC 4313, Plant Growth and Development | 3 |
| **Sub-total** | **21** |
| **Emphasis Area (Agronomy):** | **Sem. Hrs.** |
| AGST 3503, Agricultural Spatial Technologies | 3 |
| AGST 3543, Fundamentals of GIS | 3 |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry | 2 |
| PSSC 3323, Weeds and Weed Control | 3 |
| PSSC 4804, Principles of Crop Production | 4 |
| PSSC 4813, Soil Fertility | 3 |
| AGRI, AGST, HORT or PSSC electives, or BIO 1503, Biology of Plants, or related area | 14 |
| **Sub-total** | **32** |
| **Electives:** | **Sem. Hrs.** |
| Electives | **11** |
| **Total Required Hours:** | **120** |

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***Major in Plant and Soil Science***

***Bachelor of Science in Agriculture Emphasis in Environmental Horticulture***

*A complete 8-semester degree plan is available* [*at http://registrar.astate.edu/.*](http://registrar.astate.edu/)

***Students with this major must take the following:***

MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite

~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry and Lab~~

**CHEM 1044 Fundamental Concepts of Chemistry**

BIOL 1003 **AND** 1001, Biological Sciences and Laboratory

COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)

|  |  |
| --- | --- |
| **College of Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **18** |
| **Major Requirements:** | **Sem. Hrs.** |
| AGEC 3013, Agricultural Records **OR**  CIT 1503, Microcomputer Applications | 3 |
| AGRI 2213, Genetic Improvement of Plants and Animals | 3 |
| AGRI 4223, Agriculture and the Environment | 3 |
| BIO 3303 **AND** 3301, General Entomology and Laboratory **OR**  BIO 3313 **AND** 3311, Economic Entomology and Laboratory | 4 |
| PSSC 3313, Plant Disease Management | 3 |
| PSSC 2811, Soils Laboratory | 1 |
| PSSC 1301, Plant Science Laboratory | 1 |
| PSSC 4313, Plant Growth and Development | 3 |
| **Sub-total** | **21** |
| **Emphasis Area (Environmental Horticulture):** | **Sem. Hrs.** |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry | 2 |
| HORT 3293, Landscape Plant Materials | 3 |
| HORT 2253, Fundamentals of Horticulture | 3 |
| HORT 4253, Greenhouse Management | 3 |
| PSSC 3323, Weeds and Weed Control | 3 |
| AGRI, AGST or HORT electives, or BIO 1503, Biology of Plants, or related area | 18 |
| **Sub-total** | **32** |
| **Electives:** | **Sem. Hrs.** |
| Electives | **11** |
| **Total Required Hours:** | **120** |

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***Major in Nursing***

***Bachelor of Science in Nursing***

*A complete 8-semester degree plan is available* [*at http://registrar.astate.edu/.*](http://registrar.astate.edu/)

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| NRS 1123, Making Connections Nursing | **3** |
| **General Education Requirements:**  ***Prior to beginning the junior year, students must complete the following:***  *BIO 2103* ***AND*** *2101, Microbiology for Nursing and Laboratory*  *CHEM 1043* ***AND*** *1041, Fundamental Concepts of Chemistry I and Laboratory* | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84) |  |

***Students with this major must take the following:***

MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite

~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry and Laboratory~~ **~~OR~~**

**CHEM 1044 Fundamental Concepts of Chemistry**

CHEM 1013 **AND** 1011, General Chemistry I and Laboratory

BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory PSY 2013, Introduction to Psychology

SOC 2213, Introduction to Sociology

Nine hours of Fine Arts or Humanities (Required Departmental Gen. Ed. Option)

|  |  |
| --- | --- |
| **Major Requirements:**  ***Prior to beginning the junior year, students must complete the following:***  *NRS 2313, Concepts of Nursing Practice NRS 2322 Foundations of Nursing*  *NRS 2391, Health Assessment Practicum NRS 2392, Health Assessment*  *NRS 2334, Health Promotion and Introduction to Acute Care Nursing NRS 3463, Pathophysiology Based Pharmacology I*  *NRSP 2321 Foundations of Nursing Practicum NRSP 2343, Nursing Care II* | **Sem. Hrs.** |
| NRS 2313, Concepts of Nursing Practice | 3 |
| NRS 2322, Foundations of Nursing | 2 |
| NRS 2334, Health Promotion and Introduction to Acute Care Nursing | 4 |
| NRS 2392, Health Assessment | 2 |
| NRS 3312, Introduction to Nursing Research | 2 |
| NRS 3315, Acute Care Nursing I | 5 |
| NRS 3345, Acute Care Nursing II | 5 |
| NRS 3463, Pathophysiology Based Pharmacology I | 3 |
| NRS 3473, Pathophysiology Based Pharmacology II | 3 |
| NRS 4312, Chronic Illness and Rehabilitation Nursing | 2 |
| NRS 4343, Professional Nursing—Community | 3 |
| NRS 4355, Critical Care and Emergency Nursing | 5 |
| NRS 4362, Professional Role Development | 2 |
| NRS 4542, Health Care Administration | 2 |
| NRS 4481, Critical Decision Making and Testing Competencies | 1 |
| NRSP 2321, Foundations of Nursing Practicum | 1 |
| NRSP 2343, Nursing Care II | 3 |
| NRSP 2391, Health Assessment Practicum | 1 |
| NRSP 3325, Nursing Care III | 5 |
| NRSP 3355, Nursing Care IV | 5 |

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Major in Nursing

Bachelor of Science in Nursing Second Degree Accelerated Program

|  |  |
| --- | --- |
| **Admission Requirements:** |  |
| 1. Earned Bachelor Degree 2. Overall GPA of 2.5 3. Acceptable immunization status 4. Completion of the following courses with a “C” or better:   BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy/Physiology I and Laboratory  BIO 2223 **AND** 2221, Human Anatomy/Physiology II and Laboratory  ~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry I and Laboratory~~  **CHEM 1044 Fundamental Concepts of Chemistry**  **OR**  CHEM 1013 **AND** 1011, General Chemistry I and Laboratory CHEM 1052, Fundamental Concepts of Organic and Biochemistry ENG 1003, Composition I  ENG 1013, Composition II  PSY 2013, Introduction to Psychology SOC 2213, Introduction to Sociology Statistics elective - 3 credit hours  HIST 2763, The United States to 1876 **OR**  HIST 2773, The United States Since 1876 **OR**  POSC 2103, Introduction to United States Government  MATH 1023, College Algebra MATH course that requires MATH 1023 as a prerequisite |  |
| **Major Requirements:** | **Sem. Hrs.** |
| NRS 2392, Health Assessment | 2 |
| NRS 2423, Introduction to Essentials of Nursing | 3 |
| NRS 2433, Essentials of Medical-Surgical Nursing I | 3 |
| NRS 2443, Essentials of Nursing Care of the Child-Bearing Family | 3 |
| NRS 3312, Introduction to Nursing Research | 2 |
| NRS 3422, Essentials of Mental Health Nursing | 2 |
| NRS 3423, Essentials of Community Heath | 3 |
| NRS 3445, Essentials of Medical-Surgical Nursing II | 5 |
| NRS 3463, Pathophysiology Based Pharmacology I | 3 |
| NRS 3473, Pathophysiology Based Pharmacology II | 3 |
| NRS 4362, Professional Role Development | 2 |
| NRS 4425, Essentials of Medical-Surgical Nursing III | 5 |
| NRS 4443, Essentials of High Acuity Nursing | 3 |
| NRS 4542, Health Care Administration | 2 |
| NRSP 1422, Foundations of Nursing Practice | 2 |
| NRSP 2391, Health Assessment Practicum | 1 |
| NRSP 2432, Clinical Experience I | 2 |
| NRSP 3433, Clinical Experience II | 3 |
| NRSP 3453, Clinical Experience III | 3 |
| NRSP 4433, Clinical Experience IV | 3 |
| NRSP 4456, Clinical Experience V | 6 |
| NRSP 4466, Clinical Experience VI | 6 |
| **Total Required Hours:** | **67** |

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LPN-to-BSN Option

Bachelor of Science in Nursing

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **Required Courses (prior to Junior Year):** | **Sem. Hrs.** |
| BIO 2103 **AND** 2011, Microbiology for Nursing and Allied Health and Laboratory | 4 |
| BIO 2203 **AND** 2201, Human Anatomy and Physiology I and Laboratory | 4 |
| BIO 2223 **AND** 2221, Human Anatomy and Physiology II and Laboratory | 4 |
| ~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry I and Laboratory~~  **CHEM 1044 Fundamental Concepts of Chemistry OR**  CHEM 1013 **AND** 1011, General Chemistry I and Laboratory | 4 |
| CHEM 1052, Fundamental Concepts of Organic and Biochemistry | 2 |
| ENG 1003, Composition I | 3 |
| ENG 1013, Composition II | 3 |
| MATH 1023, College Algebra | 3 |
| NRS 2392, Health Assessment | 2 |
| NRS 3463, Pathophysiology Based Pharmacology I | 3 |
| NRSP 2391, Health Assessment Practicum | 1 |
| PSY 2013, Introduction to Psychology | 3 |
| SOC 2213, Introduction to Sociology | 3 |
| Statistics elective | 3 |
| **Sub-total** | **42** |
| **Major Requirements:** | **Sem. Hrs.** |
| NRS 330V, LPN-to-BSN (Special Problems) | 1 |
| NRS 3312, Introduction to Nursing Research | 2 |
| NRS 3315, Acute Care Nursing I | 5 |
| NRS 3345, Acute Care Nursing II | 5 |
| NRS 3473, Pathophysiology Based Pharmacology II | 3 |
| NRS 4312, Chronic Illness and Rehabilitation Nursing | 2 |
| NRS 4343, Professional Nursing—Community | 3 |
| NRS 4355, Critical Care and Emergency Nursing | 5 |
| NRS 4362, Professional Role Development | 2 |
| NRS 4481, Critical Decision Making and Testing Competencies in Nursing | 1 |
| NRS 4542, Health Care Administration | 2 |
| NRSP 3325, Nursing Care III | 5 |
| NRSP 3355, Nursing Care IV | 5 |
| NRSP 4336, Nursing Care V | 6 |
| NRSP 4366, Nursing Care VI | 6 |
| **Sub-total** | **53** |
| **Hours by Articulation:** | **Sem. Hrs.** |
| NRS 2313, Concepts of Nursing Practice | 3 |
| NRS 2322, Foundations of Nursing | 2 |
| NRS 2334, Health Promotion and Intro to Acute Care Nursing | 4 |
| NRSP 2321, Foundations of Nursing Practicum | 1 |
| NRSP 2343, Nursing Care II | 3 |
| **Sub-total** | **13** |
| **Total Required Hours:** | **108** |

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***RN-to-BSN Option***

***Bachelor of Science in Nursing***

*See University General Requirements for Baccalaureate degrees (p. 41)*

***Sem. Hrs.***

*See General Education Curriculum for Baccalaureate degrees (p. 84)*

***Students with this major must take the following:***

~~CHEM 1043~~ **~~AND~~** ~~CHEM 1041, Fundamentals of Chemistry I and Laboratory~~

**CHEM 1044 Fundamental Concepts of Chemistry**

BIOL 2103 **AND** BIOL 2101, Microbiology for Nurses and Laboratory

PSY 2013, Introduction to Psychology SOC 2213, Introduction to Sociology

# 35

|  |  |
| --- | --- |
| **Major Requirements:** | **Sem. Hrs.** |
| HP 3413, Cultural Competence in the Health Professions | 3 |
| NRS 2793, Health Assessment and Exam **OR**  NRS 2392, Health Assessment **AND** NRSP 2391, Health Assessment Practicum | 3 |
| NRS 3713, Evidence Based Practice | 3 |
| NRS 3723, Clinical Pathophysiology | 3 |
| NRS 4713, Chronic Illness Nursing | 3 |
| NRS 4723, High Acuity Nursing | 3 |
| NRS 4733, Nursing Management | 3 |
| NRS 4743, Community Nursing | 3 |
| NRS 4763, Professional Nursing Role | 3 |
| NRS Upper-level Nursing elective | 6 |
| NRSP 4793, RN-BSN Capstone | 3 |
| NS 2203, Basic Human Nutrition | 3 |
| **Sub-total** | **39** |
| **Hours by Articulation:** | **Sem. Hrs.** |
| NRS 2313, Concepts of Nursing Practice | 3 |
| NRS 2322, Foundations of Nursing | 2 |
| NRS 2334, Health Promotion and Intro to Acute Care Nursing | 4 |
| NRS 3315, Acute Care Nursing I | 5 |
| NRS 3473, Pathophysiology Based Pharmacology II | 3 |
| NRS 3345, Acute Care Nursing II | 5 |
| NRSP 2321, Foundations of Nursing Practicum | 1 |
| NRSP 2343, Nursing Care II | 3 |
| NRSP 3325, Nursing Care III | 5 |
| NRSP 3355, Nursing Care IV | 5 |
| **Sub-total** | **36** |
| **Required Support Courses:** | **Sem. Hrs.** |
| BIO 2203 **AND** 2201, Human Anatomy and Physiology I and Laboratory | 4 |
| BIO 2223 **AND** 2221, Human Anatomy and Physiology II and Laboratory | 4 |
| Statistics (3 hours) | 3 |
| **Sub-total** | **11** |
| **Total Required Hours:** | **121** |

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***Major in Dietetics***

***Bachelor of Science***

|  |  |
| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 41) |  |
| **First Year Making Connections Course:** | **Sem. Hrs.** |
| UC 1013, Making Connections | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 84) |  |

*A complete 8-semester degree plan is available* [*at http://registrar.astate.edu/.*](http://registrar.astate.edu/)

***Students with this major must take the following:***

MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite

~~CHEM 1043~~ **~~AND~~** ~~1041, Fundamental Concepts of Chemistry and Lab~~

**CHEM 1044 Fundamental Concepts of Chemistry**

BIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Lab PSY 2013, Introduction to Psychology

SOC 2213, Introduction to Sociology

COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)

|  |  |
| --- | --- |
| **Major Requirements:** | **Sem. Hrs.** |
| NS 3113, Nutrition through Life Cycle I | 3 |
| NS 3123, Nutritional Biochemistry | 3 |
| NS 3133, Food Service Management | 3 |
| NS 3143, Basic Foods | 3 |
| NS 3153, Food and Society | 3 |
| NS 3223, Nutrition through Life Cycle II | 3 |
| NS 3233, Dietetics Administration | 3 |
| NS 3243, Quantity Foods | 3 |
| NS 3253, Nutrition Assessment | 3 |
| NS 4413, Medical Nutrition Therapy I | 3 |
| NS 4443, Experimental Foods | 3 |
| NS 4453, Community Nutrition | 3 |
| NS 4523, Medical Nutrition Therapy II | 3 |
| NS 4553, Nutrition Counseling | 3 |
| NS 4563, Special Topics | 3 |
| NS 4573, Research Methods in Nutrition | 3 |
| NSP 3213, Practicum I | 3 |
| NSP 3326, Practicum II | 6 |
| NSP 4433, Practicum III | 3 |
| NSP 4543, Practicum IV | **3** |
| NSP 4656, Practicum V | 6 |
| STAT 3233, Applied Statistics I | 3 |
| **Sub-total** | **72** |

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**ANSC 1622. Intermediate Huntseat Equitation and Jumping** Refinement of the experienced riders skills in the area of huntseat riding and jumping. Includes flat work and jumping exercises to build skills and condition the horses and riders for jumping. Four hours of lab per week. Pre- requisite, ANSC 1602 or permission of instructor. Fall, Spring.

**ANSC 2012.** This is an Advanced Equitation course that focuses on the training and exhibition of a versatile Western Stock Horse. Prerequisites, ANSC 1602 or ANSC 1612. Spring.

**ANSC 2623. Equine Health and Management** Course covers aspects of equine health, diseases, soundness, first aid, preventative maintenance, and management of horses in domestic situations. Three hours of lecture per week. Fall.

**ANSC 3003. Small Animal Nutrition** Fundamental concepts of nutrition applied to companion animals including dogs, cats, and other common pets. Prerequisite, ANSC 1613 or BIO 2013. Summer, even.

**ANSC 3203. Small Animal Care and Management** Science and practice of raising and keep- ing small animals as pets or companion animals. Topics related to nutrition and feeding, training, reproduction, breeding, grooming, housing and equipment, preventative medicine, and common diseases will be covered. Prerequisites, ANSC 1613 or BIOL 1003 or BIO 2013. Fall, even.

**ANSC 3613. Nutritional Management of Domestic Animals** Principles of animal nutrition, composition of feedstuffs, diet formulation, and nutritional management of cattle, horses, sheep, swine, poultry, dogs and cats. Two hours lecture, two hours laboratory per week. Prerequisite, ANSC 1613. Fall.

**ANSC 3633. Veterinary Anatomy and Physiology** Structure and function of the body in farm animals. Includes lectures on cardiac, renal, respiratory and muscle physiology, neurology, histol- ogy, bone development and endocrine control of the above systems. Prerequisite, ANSC 1613. Fall.

**ANSC 3653. Meat Science and Processing** Study of meat science and meat processing. Prop- erties of fresh and processed meats. Instruction in the preservation of meat and meat products, including hands on experience in processed meat manufacturing, curing, and barbecuing. Fall, even.

**ANSC 3663. Small Ruminant Production** Methods of management in producing sheep and goats. Lecture two hours, laboratory two hours per week. Prerequisite, ANSC 1613. Spring, even.

**ANSC 3703. Poultry Flock Management** Management of laying and brooding flocks, raising of replacements, study of all economic factors relating to efficient production and marketing. Lecture two hours, laboratory two hours per week. Spring.

**ANSC 4613. Horse Production** Selection, breeding, feeding, management, marketing of horses, and equitation. Lecture two hours, laboratory two hours per week. Prerequisite, ANSC 1613. Spring.

**ANSC 4623. Beef Cattle Production** Management practices of commercial and purebred herds.

Lecture two hours, laboratory two hours per week. Spring, odd.

**ANSC 4633. Diseases of Farm Animals** Prevention, treatment, and control of common diseases,

including problems of hygiene and sanitation. Prerequisite, ANSC 3633. Summer, even.

**ANSC 4663. Principles of Breeding** Basic application of genetic principles to the improvement

of farm animals. Fall.

**ANSC 4673. Digestive Physiology and Nutrition of Domestic Animals** The role of nutrients and physiological and metabolic mechanisms involved in nutrient utilization by domestic animals. Emphasis on food producing animals, horses, dogs, cats, and catfish. Prerequisite, ANSC 1613, and CHEM 1013 or ~~CHEM 1043~~ **CHEM 1044**. Spring.

**ANSC 4683. Theriogenology** Teaches the anatomy, physiology, endocrinology, and biochemistry of reproduction in farm animals. Introduces students to methods of manipulating reproduction within livestock systems. Management topics include artificial insemination, estrus synchroniza- f parturition, embryo transfer, and reproductive disease prevention. Prerequisite,

13. Spring.

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**HORT 4323. Plant Propagation**

of plants. Prerequisite, PSSC

loyed in the propagation

**HORT 4333. Greenhouse and Nursery Production** Principles and practices involved in greenhouse and nursery operations: production, management, and marketing. Lecture and Lab. Prerequisite, PSSC 1303. Spring, even.

**Plant and Soil Science (PSSC)**

**PSSC 1301. Plant Science Laboratory** Introductiontoagronomicandhorticulturalconceptsrelated to crop anatomy, growth and development, physiology, and pest identification and management. Spring.

**PSSC 1303. Introduction to Plant Science** Agronomic and horticultural cropping systems includ- ing crop growth and development, crop physiology, crop ecology, environmental considerations, and production and protection practices. Fall, Spring.

**PSSC 2811. Soils Laboratory** Introduction to soil properties and processes through hands-on laboratory experience. Corequisite or prerequisite, PSSC 2813. Fall.

**PSSC 2813. Soils** Origin, classification, physical and chemical properties of soil and environ- mental considerations. Prerequisite, CHEM 1013 or ~~CHEM 1043~~ **CHEM 1044**. Fall, Spring.

**PSSC 3313. Plant Disease Management** Introduction to management of plant diseases. Ma- jor concepts include genetic, cultural, and biological controls as related to management of plant systems. Self study course utilizing computer technology, seminars, and laboratory exercises. Prerequisites, PSSC 1303. Spring.

**PSSC 3323. Weeds and Weed Control** Identification and pest management of weeds in agro- nomic, horticultural, and urban systems. Survey of herbicides, their chemistry, toxicology, modes of action, uses, and environmental impact. Lecture two hours and laboratory two hours per week. Prerequisites, CHEM 1013 or ~~CHEM 1043~~ **CHEM 1044**; and PSSC 1303. Spring.

**PSSC 3333. Plant Breeding** History of plant improvement, methods of plant breeding, and the basic application of these methods to various agronomic and horticultural crops. Prerequisite, AGRI 2213. Fall, odd.

**PSSC 3802. Pasture and Forage Crops** Introduction to important forage and pasture crops in the mid south region. Discussions will include cropping systems, plant growth and develop- ment, physiology, and environmental considerations. Prerequisite, PSSC 1303. Fall, even.

**PSSC 4313. Plant Growth and Development** Auxins, gibberellins, and various other regulators of plant growth, also phenomena such as flowering and dormancy. Prerequisites, CHEM 1052, HORT 2253 and PSSC 1303. Fall.

**PSSC 4343. Seed Production, Processing and Analysis** Methods of producing quality seeds and seed stocks, processing methods, and techniques of seed analysis and grading. Prerequisite, PSSC 1303. Spring, odd. Dual-listed with PSSC 5343.

**PSSC 4513. Plant Biotechnology** Course materials will address the why and how of plant gene transfer plus the issues involved in making those plants part of the agricultural landscape. Dual listed as PSSC 5513. Prerequisite: AGRI 2213 or BIOL 3013 or permission of instructor. Spring.

**PSSC 4713. Soil Quality Assessment and Interpretation** Astudy of the indicators of soil quality, documentation and measurement of soil quality, interpretations of soil quality, impacts and effects of management of soil quality, and the role of conservation planning in improving soil quality. Pre- requisite, PSSC 2813. Fall, even.

**PSSC 4804. Principles of Crop Production** Introduction to agronomic cropping systems which includes production systems, concepts related to crop selection and genetics, establishment and management of the crop, and harvest management. Environmental issues related to crop produc- tion and sustainability are also evaluated. Prerequisites, PSSC 1303 and PSSC 2813. Fall.

**PSSC 4813. Soil Fertility** Principles involved in maintaining and increasing fertility of soil. Pre­requisite, PSSC 2813, and CHEM 1013 and CHEM 1011 or ~~CHEM 1043 and CHEM 1041~~. **CHEM 1044** Spring.

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# Method and Material Teaching Science (EDSC)

**EDSC 4593. Methods and Materials Teaching Science in the Secondary School** Philosophical bases, teaching techniques, curriculum development, classroom management, facility resources, and equipment are emphasized. Must be admitted to the Teacher Education Program. Fall, Spring.

# Teaching Internship (TIBI)

## TIBI 4825. Biology Teaching Internship in the Secondary School

Ten semester hours. Full semester teaching internship. Fall, Spring.

## TIBI 4826. Biology Teaching Internship in the Secondary School

Twelve semester hours. Full semester of teaching internship. Fall, Spring..

# DEPARTMENT OF CHEMISTRY AND PHYSICS

**Chemistry (CHEM)**

**CHEM 1003. Introduction to Chemistry** Fundamentals of chemical terms and applications to laboratory studies. Extensive drills on calculations and use of hand held calculator in problem solving. Recommended for those with no prior study of chemistry. Special course fees may apply. Corequisite or prerequisite, MATH 0003, MATH 0013, or MATH 1023. Fall, Spring.

**CHEM 1011. General Chemistry I Laboratory** Introduction and development of hands-on tech- niques essential to the use of fundamental equipment and glassware common in all laboratory based sub-fields of chemistry. Computer-based graphical and statistical analysis of data. Three hours per week. Special course fees may apply. Prerequisite or corequisite, CHEM 1013. Fall, Spring, Summer. (ACTS#: CHEM 1414)

**CHEM 1013. General Chemistry I** Study of chemical reactions and equations, periodic rela- tionships, the gaseous state, and the fundamentals of atomic theory, quantum theory, electronic structure, chemical bonding, stoichiometry and thermochemistry. Special course fees may apply. Prerequisite, MATH 1023 or ACT composite score of 23 or higher. Prior completion of CHEM 1003 or high school chemistry strongly recommended. Fall, Spring, Summer. (ACTS#: CHEM 1414)

**CHEM 1021. General Chemistry II Laboratory** Continuation of CHEM 1011, with focus on dem- onstrating mastery of selected hands-on laboratory techniques and computer-assisted graphical and statistical analysis of data. Three hours per week. Corequisite or prerequisite, CHEM 1023. Prerequisite, CHEM 1011. Fall, Spring, Summer. (ACTS#: CHEM 1424)

**CHEM 1023. General Chemistry II** Study of liquids, solids, solutions and the fundamentals of chemical kinetics, chemical equilibria, acids and bases, thermodynamics, and electrochemistry. Special course fees may apply. Prerequisites, CHEM 1011 and C or better in CHEM 1013. Fall, Spring, Summer. (ACTS#: CHEM 1424)

**CHEM 1041. Fundamental Concepts of Chemistry Laboratory** Special course fees apply.

Prerequisite or corequisite of CHEM 1043. Fall, Summer.

**CHEM 1043. Fundamental Concepts of Chemistry** A one semester chemistry survey course introducing selected fundamental concepts including dimensional analysis, mole concept, atomic and molecular structure, nomenclature, chemical reactions, thermochemistry, intermolecular inter- actions, gases, mixtures, kinetics, equilibrium and acid base chemistry. Fall, Summer.

**CHEM 1044** **A one semester, integrated lecture/laboratory chemistry survey course introducing selected fundamental concepts, including dimensional analysis, mole concept, atomic and molecular structure, nomenclature, chemical reactions, thermochemistry, intermolecular inter­actions, gases, mixtures, kinetics, equilibrium and acid base chemistry. Fall, Spring**

**CHEM 1052. Fundamental Concepts of Organic and Biochemistry** A continuation of CHEM 1043 with a focus on the role of chemistry in human body functions. Prerequisites ~~CHEM 1043 and CHEM 1041~~ **CHEM 1044**. Spring, Summer.

**CHEM 2002. Computers in Chemistry** Introduction to computer software and common practices used in the analysis and presentation of scientific data. Corequisite or prerequisite, CHEM 1023 and CHEM 1021. Spring.