CHEMISTRY - BS, MATERIALS CHEMISTRY TRACK

Program Requirements

First Year		
Fall		**Semester Credit Hours**
CHEM 100	Horizons in Chemistry	1
CHEM 119	Fundamentals of Chemistry I [1]	4
ENGL 104 or ENGL 210	Composition and Rhetoric or Technical and Professional Writing	3
MATH 151 or MATH 171	Engineering Mathematics I or Calculus I	4
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)		3
	Semester Credit Hours	**15**
Spring		
CHEM 120	Fundamentals of Chemistry II [1]	4
MATH 152 or MATH 172	Engineering Mathematics II or Calculus II	4
PHYS 206	Newtonian Mechanics for Engineering and Science	3
PHYS 226	Physics of Motion Laboratory for the Sciences	1
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history)		3
	Semester Credit Hours	**15**
Second Year		
Fall		
CHEM 227	Organic Chemistry I [1]	3
CHEM 231	Techniques of Organic Chemistry	2
PHYS 207	Electricity and Magnetism for Engineering and Science	3
PHYS 227	Electricity and Magnetism Laboratory for the Sciences	1
Select one of the following		3-4
MATH 221	Several Variable Calculus	
MATH 251	Engineering Mathematics III	
MATH 253	Engineering Mathematics III	
	Semester Credit Hours	**13**
Spring		
CHEM 228	Organic Chemistry II [1]	3
CHEM 234	Organic Synthesis and Analysis [2]	3
CHEM 362	Descriptive Inorganic Chemistry	3
Select one of the following:		3
MATH 304	Linear Algebra	
MATH 308	Differential Equations	
STAT 211	Principles of Statistics I	
Materials chemistry elective [3]		3
	Semester Credit Hours	**15**
Third Year		
Fall		
CHEM 315	Fundamentals of Quantitative Analysis	3
CHEM 318	Quantitative Analysis Laboratory	1
CHEM 327	Physical Chemistry I	3
CHEM 433	Advanced Inorganic Chemistry Laboratory	2
CHEM 468	Materials Chemistry of Inorganic Materials	3
CHEM 491	Research	3
	Semester Credit Hours	**15**
Spring		
CHEM 325	Physical Chemistry Laboratory I	1
CHEM 328	Physical Chemistry II	3
CHEM 466	Polymer Chemistry	3
CHEM 491	Research	3
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication)		3
Materials chemistry elective [3]		3
	Semester Credit Hours	**16**
Fourth Year		
Fall		
CHEM 326	Physical Chemistry Laboratory II	1
CHEM 415	Analytical Chemistry	3
POLS 207	State and Local Government	3
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts)		3
Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture)		3
Materials chemistry elective [3]		3
	Semester Credit Hours	**16**
Spring		
CHEM 434	Analytical Instrumentation Laboratory	2
CHEM 481	Seminar [2]	2
POLS 206	American National Government	3
Social and behavioral sciences (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences)		3
Materials chemistry elective [3]		3
General elective [5]		2-3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**120**

1. Select a section designated for chemistry majors.
2. This is a designated oral communication (C) or writing (W) course.
3. In consultation with an advisor, select 12 hours from among CHEM 220; CHEM 462; CHEM 470; MEEN 222/MSEN 222 or BMEN 343, MEEN 458.
4. Three hours of CHEM 484 may be substituted for 3 hours of CHEM 491 in consultation with an advisor.
5. Select any course 100-499 not used elsewhere except AERS 100-299 (http://catalog.tamu.edu/undergraduate/course-descriptions/aers/); CHEM 222, CHEM 242; MATH 102, MATH 140, MATH 142, MATH 167,

MATH 168; MLSC 100-299 (http://catalog.tamu.edu/undergraduate/course-descriptions/mlsc/); NVSC 100-299 (http://catalog.tamu.edu/undergraduate/course-descriptions/nvsc/); PHYS 201, PHYS 202, PHYS 205.

Graduation requirements include a requirement for 3 hours of International and Cultural Diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/) courses and 3 hours of Cultural Discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/) courses. A course satisfying a Core category, a college/department requirement, or a general elective can be used to satisfy this requirement.

The total hours of CHEM 484, CHEM 485 and CHEM 491 taken by BS chemistry majors on a graded (A–F) basis may not exceed 15. Additional hours of these courses may be taken on a satisfactory/unsatisfactory basis.

Electives should be chosen in consultation with the chemistry advisor and should be selected to meet the residency requirement. (http://catalog.tamu.edu/undergraduate/general-information/degree-information/#requirementsforabaccalaureatedegreetext)