

SECONDARY EDUCATION (SEED)

300 Level Courses

SEED 367: *Teaching History and Social Science in the Secondary School*. 3 credits.

Provides teacher candidates with an introduction to methods, frameworks, and practices of teaching social studies in secondary schools. Notes: Requires 15 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Corequisite: SEED 422

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 370: *Young Adult Literature in Multicultural Settings*. 3 credits.

Examines literary works written for and about young adults, introduces critical issues surrounding teaching of young adult literature in multiculturally diverse schools, and requires reading and review of young adult literature. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Mason Core: Mason Core (All), Literature (<http://catalog.gmu.edu/mason-core/>)

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 372: *Teaching Mathematics in the Secondary School*. 3 credits.

Provides study of curricula, current issues, and research literature in secondary school mathematics, with emphasis on developing different styles of teaching. Note: 15 hours school-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Corequisite: SEED 422

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

400 Level Courses

SEED 405: *Teaching and Learning Difficult Histories*. 3 credits.

Provides study of the issues, concepts, and problems of secondary education practice related to difficult history, including traumatic historical events and moments. Enables students to create culturally responsive, student-centered secondary education lesson plans focused on difficult history topics. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 406: *LGBTQ Issues in Education*. 3 credits.

Provides an overview of contemporary issues and concepts related to lesbian, gay, bisexual, trans, and queer persons and communities as they relate to systems, structures, and experiences within educational contexts, such as schools, museums, and community organizations. Focuses on theories, methods, and practices to support learners and educators in settings inclusive of all sexual identities and orientations. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Schedule Type: Seminar

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 407: *Assessing Learning and Teaching in the Secondary Classroom*. 3 credits.

Supports beginning teachers' development and design of assessment practices for promoting student learning. Focuses on individual differences and classroom, teacher, school, and cultural factors that impact assessment; different types and purposes of assessment; and relationship of assessment to national and state standards. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: ((SEED 467^C, 472^C, 476^C, 479^C or 483^C) and ((SEED 478^{*C} and 492^{*C}) or SEED 493^{*C}, 494^{*C}, 494^{*C}, 495^{*C} or 496^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 408: *Creating Advocacy with Adolescent Learners*. 3 credits.

Provides opportunities to study and apply diverse educational practices to increase adolescent's advocacy in the classroom setting. Explores educational theoretical frameworks and teaching methods of building community among educators and learners in the classroom. Assesses various forms of student participation and educational philosophies to foster teacher-student relationships in the secondary education classroom. Note: School-based and/or community based clinical experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 409: *Perspectives on Extraordinary Teaching*. 3 credits.

Supports development of reflective, professional, collaborative, and research-based secondary school practitioners across subject areas;

calls on pre-service and in-service teachers to interact with young people and teachers in range of school settings; explores adolescents' points of view on teaching, using range of methods and visual and technology-oriented media; provides students with multiple opportunities to plan and implement instruction. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 422: *Foundations of Secondary Education*. 3 credits.

Provides students with opportunities to analyze philosophical assumptions, curriculum issues, learning theories, and history associated with current teaching styles, emphasizing applications to all disciplines taught in secondary schools and examination of educational trends and issues. Note: 15 hours of school-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDUC 422.

Recommended Corequisite: SEED 367 or SEED 372 or SEED 466 or SEED 469 or SEED 473

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 440: *Human Development, Learning, and Teaching*. 3 credits.

Explores processes that influence intellectual, social, emotional, moral, ethical, and physical development of middle and high school students. Examines research and theories for understanding the learning process. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDUC 372.

Recommended Corequisite: SEED 409

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 466: *Teaching Computer Science in Secondary School*. 3 credits.

Provides study of different styles of teaching, curricula, current issues, and research literature in secondary school computer science. Notes: Requires 15 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Corequisite: SEED 422

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 467: *Advanced Methods of Teaching History and Social Science in the Secondary School*. 3 credits.

Provides study of interdisciplinary curriculum and instruction and implementation of national state standards, authentic assessment, and adaptations for diverse populations for the teaching of social studies.

Notes: Requires 30 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Prerequisite: SEED 422, SEED 440 (earned grades of C or better)

Registration Restrictions:

Required Prerequisites: SEED 367^C, 419^{*C} and 477^{*C}.

^{*} May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 469: *Teaching English in Secondary School*. 3 credits.

Provides study of methods, materials, content, and organization of English programs in secondary school. Note: 15 hours school-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Corequisite: SEED 422

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 472: *Advanced Methods for Teaching Mathematics in the Secondary School*. 3 credits.

Provides advanced study of learning processes for mathematics, introducing national and state standards regarding content and methodologies for teaching mathematics. Examines instructional methods and materials in relation to secondary mathematical content, curriculum, and assessment. Notes: Requires 30 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Prerequisite: SEED 440, SEED 422 (earned grades of C or better)

Recommended Corequisite: EDRD 419, SEED 477

Registration Restrictions:

Required Prerequisite: SEED 372^C.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 473: *Teaching Science in the Secondary School*. 3 credits.

Provides study of methods, materials, content, and organization of science programs. Emphasizes curriculum planning, current methodologies, safety, and trends in secondary schools. Note: Students must also complete 15 hours of field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDCI 473.

Recommended Corequisite: SEED 422

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 476: *Advanced Methods of Teaching Computer Science in the Secondary School*. 3 credits.

Provides study of learning processes for computer science (CS); national and state standards regarding content and methodologies for teaching CS; and instructional methods and materials in relation to secondary CS content, curriculum, and assessment. Notes: Requires 30 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Prerequisite: SEED 422, SEED 440 (earned grades of C or better)

Registration Restrictions:

Required Prerequisites: (SEED 466^C, EDRD 419^{*C} and SEED 477^{*C}).

* May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 477: *Studying Teacher Impact on Student Learning*. 3 credits.

Provides study of secondary instructional practices during co-teaching in a secondary school setting, including analysis of pre- and post-assessments to improve instructional practices. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: ((SEED 367^C, 372^C, 466^C, 469^C or 473^C) and ((EDRD 419^{*C} and SEED 467^{*C}) or SEED 479^{*C}, 472^{*C}, 483^{*C} or 476^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 478: *Implementing Teacher Impact on Student Learning*. 3 credits.

Provides opportunity to critically reflect regarding the effects of teacher actions on others; develops skills as a reflective practitioner; presents research-based rationales for instructional decision-making; links evidence of student learning collected in instructional setting to make informed instructional decisions; engages students in systematic collection and interpretation of evidence to improve practice. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: ((SEED 477^C, EDRD 419^C and SEED 467^C or SEED 479^C, 483^C, 472^C or 496^C) and ((SEED 407^C, 492^C, 493^C, 494^C, 495^C or 496^C)).

^C Requires minimum grade of C.

Schedule Type: Seminar

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 479: *Advanced Methods of Teaching English in the Secondary School*. 3 credits.

Guides students in working effectively with national and local standards for teaching secondary English. Notes: Requires 30 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Prerequisite: SEED 422, SEED 440 (earned grades of C or better)

Registration Restrictions:

Required Prerequisites: SEED 469^C, EDRD 419^{*C} and SEED 477^{*C}.

* May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 483: *Advanced Methods of Teaching Science in Secondary School*. 3 credits.

Provides advanced study of teaching and curriculum development based on research and current issues. Emphasizes integrating science and technology, and adapting instruction to the needs of diverse learners. School-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Recommended Prerequisite: SEED 422, SEED 440 (earned grades of C or better)

Registration Restrictions:

Required Prerequisites: SEED 473^C, EDRD 419^{*C} and SEED 477^{*C}.

* May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Lecture

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 491: *Internship Seminar in Secondary Teaching*. 2 credits.

Focuses on critical reflection regarding effects of teacher actions on others; develops skills as a reflective practitioner; presents research-based rationales for instructional decision-making. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDCI 491.

Recommended Prerequisite: All students must have completed all licensure and all endorsement course work.

Registration Restrictions:

Required Prerequisites: (((SEED 422^C or 422^{XS}) and SEED 440^C and EDRD 419^C) and ((SEED 469^C and 479^C) or (SEED 372^C and 472^C) or (SEED 473^C and 483^C) or (SEED 466^C and 476^C)) and (SEED 492^{*C}, 493^{*C}, 494^{*C} or 496^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Enrollment is limited to students with a major in Secondary Ed - Biology 6-12, Secondary Ed - Chemistry 6-12, Secondary Ed - Mathematic 6-12, Secondary Ed - English 6-12, Secondary Ed - Comp Sci 6-12, Secondary Ed - Physics 6-12 or Secnd Ed - Earth Science 6-12.

Schedule Type: Seminar

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 492: *Internship: Secondary Education English*. 9 credits.

Provides intensive, supervised clinical experience in English grade 6-12 classroom in approved school for fall or spring semester. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDCI 490, SEED 493, SEED 494, SEED 496.

Mason Core: Mason Core (All), Mason Apex (<http://catalog.gmu.edu/mason-core/>)

Registration Restrictions:

Required Prerequisites: ((SEED 422^C or 422^{XS}) and SEED 440^C, EDRD 419^C, SEED 477^C and 479^C) and ((SEED 478^{*C} and 407^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

^C Requires minimum grade of c.

Schedule Type: Internship

Grading:

This course is graded on the Undergraduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 493: *Internship: Secondary Education Math*. 9 credits.

Provides intensive, supervised clinical experience in mathematics grade 6-12 classroom in approved school for fall or spring semester. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDCI 490, SEED 492, SEED 494, SEED 496.

Mason Core: Mason Core (All), Mason Apex (<http://catalog.gmu.edu/mason-core/>)

Registration Restrictions:

Required Prerequisites: ((SEED 422^C or 422^{XS}) and SEED 440^C, EDRD 419^C, SEED 477^C and 472^C and (SEED 478^{*C} and 407^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Internship

Grading:

This course is graded on the Undergraduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 494: *Internship: Secondary Education Science*. 9 credits.

Provides intensive, supervised clinical experience in science grade 6-12 classroom in approved school for fall or spring semester. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDCI 490, SEED 492, SEED 493, SEED 496.

Mason Core: Mason Core (All), Mason Apex (<http://catalog.gmu.edu/mason-core/>)

Registration Restrictions:

Required Prerequisites: ((SEED 422^C or 422^{XS}) and SEED 440^C, EDRD 419^C, SEED 477^C and 483^C and (SEED 478^{*C} and 407^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Internship

Grading:

This course is graded on the Undergraduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 495: *Internship: Secondary Education History and Social Science*. 9 credits.

Provides an intensive, supervised clinical experience in a social studies grade 6-12 classroom in an approved school for fall and/or spring semester. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Registration Restrictions:

Required Prerequisites: SEED 422^C, 440^C, EDRD 419^C, SEED 477^C, 467^C, 478^{*C} and 407^{*C}.

* May be taken concurrently.

^C Requires minimum grade of C.

Schedule Type: Internship

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 496: *Internship: Secondary Education Computer Science*. 9 credits.

Provides intensive, supervised clinical experience in computer science grade 6-12 classrooms in approved school for fall or spring semester. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts. Equivalent to EDCI 490, SEED 492, SEED 493, SEED 494.

Mason Core: Mason Core (All), Mason Apex (<http://catalog.gmu.edu/mason-core/>)

Registration Restrictions:

Required Prerequisites: ((SEED 422^C or 422^{XS}) and SEED 440^C, EDRD 419^C, SEED 477^C and 476^C and (SEED 478^{*C} and 407^{*C})).

* May be taken concurrently.

^C Requires minimum grade of C.

^{XS} Requires minimum grade of XS.

Schedule Type: Internship

Grading:

This course is graded on the Undergraduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

500 Level Courses

SEED 502: *Young Adult Literature in Multicultural Settings*. 3 credits.

Examines the historical development of literary works written for and about young adults. Considers critical issues surrounding the use and teaching of young adult literature in today's culturally diverse public schools. Requires the reading and review of young adult literature in a variety of genres. Offered by School of Education (<http://catalog.gmu.edu/policies/academic/grading/>)

catalog.gmu.edu/colleges-schools/education-human-development/school-education/). May be repeated within the degree for a maximum 6 credits.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 505: *Teaching and Learning Difficult Histories*. 3 credits.

Provides study of the issues, concepts, and problems of secondary education practice related to difficult history, including traumatic historical events and moments. Enables students to create culturally responsive, student-centered secondary education lesson plans focused on difficult history topics. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 507: *Assessing Learning and Teaching in the Secondary Classroom*. 3 credits.

Supports beginning teachers' development and design of assessment practices for promoting student learning. Focuses on individual differences and classroom, teacher, school, and cultural factors that impact assessment; different types and purposes of assessment; and relationship of assessment to national and state standards. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Registration Restrictions:

Required Prerequisites: (SEED 567^B, 569^B, 572^B, 573^B or 566^B).

^B Requires minimum grade of B.

Enrollment limited to students in the Education Human Development college.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 508: *Creating Advocacy with Adolescent Learners*. 3 credits.

Provides opportunities to study and apply diverse educational practices to increase adolescent's advocacy in the classroom setting. Explores educational theoretical frameworks and teaching methods of building community among educators and learners in the classroom. Assesses various forms of student participation and educational philosophies to foster teacher-student relationships in the secondary

education classroom. Note: School-based and/or community based clinical experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to three attempts.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 509: *Perspectives on Extraordinary Teaching*. 3 credits.

Supports development of reflective, professional, collaborative, and research-based secondary school practitioners across subject areas; calls on pre-service and in-service teachers to interact with young people and teachers in range of school settings; explores adolescents' points of view on teaching, using range of methods and visual and technology-oriented media; provides students with multiple opportunities to plan and implement instruction Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May be repeated within the degree for a maximum 6 credits.

Recommended Prerequisite: Admission to the School of Education

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 522: *Foundations of Secondary Education*. 3 credits.

Analyzes philosophical assumptions, curriculum issues, learning theories, and history associated with current teaching styles. Emphasizes applications to all disciplines taught in secondary schools. Examines current educational trends and issues in relation to sociology of secondary school settings. Notes: 15 hours school-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDUC 522.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 540: *Human Development and Learning: Secondary Education*. 3 credits.

Explores developmental issues associated with middle and high school students, and theories that provide basis for understanding learning process. Addresses implications for designing instruction and curriculum. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDUC 672.

Recommended Corequisite: SEED 566, 567, 569, 572, or 573.

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 566: *Teaching Computer Science in the Secondary School*. 3 credits. Emphasizes developing different styles of teaching and covers curricula, current issues, and research literature in secondary school computer science. Note: School-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Corequisite: SEED 540

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Enrollment is limited to Graduate, Non-Degree or Undergraduate level students.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 567: *Teaching Social Studies in the Secondary School*. 3 credits. Provides teacher candidates an introduction to methods, frameworks, and practices of teaching social studies in secondary schools. Notes: Requires 15 hours of school-based field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDCI 567.

Recommended Corequisite: SEED 540

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 569: *Teaching English in the Secondary School*. 3 credits.

Provides study of methods, materials, content, and organization of English programs in secondary school. Notes: 15 hours school-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Corequisite: SEED 540

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 572: *Teaching Mathematics in the Secondary School*. 3 credits.

Emphasizes developing different styles of teaching and covers curricula, current issues, and research literature in secondary school mathematics. Notes: 15 hours of school-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Corequisite: SEED 540

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 573: *Teaching Science in the Secondary School*. 3 credits.

Provides study of methods, materials, content, and organization of science programs. Emphasizes curriculum planning, current methodologies, safety, and trends in secondary schools. Note: Students must also complete 15 hours of field experience. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDCI 573.

Recommended Corequisite: SEED 540

Registration Restrictions:

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

600 Level Courses

SEED 667: *Advanced Methods of Teaching Social Sciences in the Secondary School.* 3 credits.

Emphasizes interdisciplinary curriculum and instruction and implementing national state standards, authentic assessment, and adaptations for diverse populations. Notes: School-based clinical experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Prerequisite: SEED 522 (requires minimum grade of B) and SEED 540 (requires minimum grade of B)

Registration Restrictions:

Required Prerequisites: ((SEED 567^B) and (EDRD 619^{*B} and SEED 677^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 669: *Advanced Methods of Teaching English in the Secondary School.* 3 credits.

Guides students in working effectively with national and local standards for teaching secondary English. Note: School-based clinical experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDCI 669.

Recommended Prerequisite: SEED 522 (requires minimum grade of B) and SEED 540 (requires minimum grade of B)

Registration Restrictions:

Required Prerequisites: ((SEED 569^B) and (EDRD 619^{*B} and SEED 677^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 672: *Advanced Methods of Teaching Mathematics in the Secondary School.* 3 credits.

Focuses on learning processes for mathematics. Introduces national and state standards regarding content and methodologies for teaching mathematics. Examines instructional methods and materials in relation to secondary mathematical content, curriculum, and assessment. Note: School-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Prerequisite: SEED 522 (requires minimum grade of B) and SEED 540 (requires minimum grade of B)

Registration Restrictions:

Required Prerequisites: (SEED 572^B, EDRD 619^{*B} and SEED 677^{*B}).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 673: *Advanced Methods of Teaching Science in the Secondary School.* 3 credits.

Provides advanced study of teaching and curriculum development based on research and current issues. Emphasizes integrating science and technology, and adapting instruction to the needs of diverse learners. School-based field experience required. May not be repeated for credit. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Prerequisite: SEED 522 (requires minimum grade of B) and SEED 540 (requires minimum grade of B)

Registration Restrictions:

Required Prerequisites: (SEED 573^B, EDRD 619^{*B} and SEED 677^{*B}).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 675: *Research in Secondary Education.* 3 credits.

Links evidence of student learning to make informed instructional decisions. Engages students in critiquing various research paradigms, reviewing literature, and systematically collecting and interpreting evidence to improve practice. Notes: All students enrolled in this course must be working daily in or have access to a classroom setting (during the semester in which they enroll in this course or a semester following), since the major course assignment involves a classroom-based teacher research project. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDUC 675.

Recommended Prerequisite: SEED 540, SEED 522

Recommended Corequisite: For students seeking English licensure: SEED 669 and EDRD 619 For students seeking math licensure: SEED 672 and EDRD 619 For students seeking science licensure: SEED 673 and EDRD 619 For students seeking history/social studies licensure:

SEED 667 and EDRD 619 For students seeking computer science licensure: SEED 676 and EDRD 619

Registration Restrictions:

Required Prerequisites: (SEED 569^B, 572^B, 573^B, 567^B or 566^B).

^B Requires minimum grade of B.

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed - Biology, Secondary Ed - Chemistry, Secondary Ed - English, Secondary Ed - Hist/Soc Sci, Secondary Ed - Math, Secondary Ed - Computer Science, Secondary Ed - Physics, Secondary Ed - Earth Science or Secondary Education Licensure.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Special scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 676: *Advanced Methods of Teaching Computer Science in the Secondary School*. 3 credits.

Emphasizes learning processes for computer science (CS). Introduces national and state standards regarding content and methodologies for teaching CS. Examines instructional methods and materials in relation to secondary CS content, curriculum, and assessment. Note: School-based field experience required. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Prerequisite: SEED 522 (requires minimum grade of B) and SEED 540 (requires minimum grade of B)

Registration Restrictions:

Required Prerequisites: (SEED 566^B, EDRD 619^{*B} and SEED 677^{*B}).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 677: *Action Research Methods in Secondary Education*. 1 credit.

Links evidence of student learning to make informed instructional decisions. Engages students in critiquing various research paradigms and reviewing literature, to plan for systematically collecting and interpreting evidence to improve practice. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit.

Recommended Corequisite: EDRD 619 and either SEED 667, SEED 669, SEED 672, SEED 673, or SEED 676

Registration Restrictions:

Required Prerequisites: ((SEED 522^B and 540^B) and (SEED 566^B, 567^B, 569^B, 572^B or 573^B)).

^B Requires minimum grade of B-.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 678: *Action Research Seminar in Secondary Education*. 2 credits.

Focuses on critical reflection regarding the effects of teacher actions on others; develops skills as a reflective practitioner. Links evidence of student learning collected in instructional setting to make informed instructional decisions. Engages students in systematic collection and interpretation of evidence to improve practice. Presents research-based rationales for instructional decision-making. Serves as a follow-up for SEED 677. Note: Requires students to be working daily in or have access to a classroom setting to implement the classroom-based teacher research project designed in SEED 677. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). Limited to two attempts.

Registration Restrictions:

Required Prerequisites: (SEED 677^B and (SEED 792^{*B}, 793^{*B}, 794^{*B}, 795^{*B} or 796^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B-.

Enrollment limited to students with a class of Advanced to Candidacy, Graduate, Junior Plus, Non-Degree or Senior Plus.

Students in a Non-Degree Undergraduate degree may **not** enroll.

Schedule Type: Lecture

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

700 Level Courses

SEED 791: *Internship Seminar in Secondary Teaching*. 2 credits.

Focuses on critical reflection regarding effects of teacher actions on others; develops skills as a reflective practitioner; presents research-based rationales for instructional decision-making. Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May not be repeated for credit. Equivalent to EDCI 791.

Recommended Prerequisite: Students must also have completed all licensure and all endorsement course work prior to enrolling.

Registration Restrictions:

Required Prerequisites: (((SEED 522^B, 540^B and EDRD 619^B)) and (((SEED 569^B and 669^B)) or ((SEED 572^B and 672^B)) or ((SEED 573^B and 673^B)) or ((SEED 567^B and 667^B)) or ((SEED 566^B and 676^B))) and (SEED 792^{*B}, 793^{*B}, 794^{*B}, 795^{*B}, 796[] or 796^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Requires minimum grade of .

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed - Biology, Secondary Ed - Chemistry, Secondary Ed - English, Secondary Ed - Hist/Soc Sci, Secondary Ed - Math, Secondary Ed - Computer Science, Secondary Ed - Physics, Secondary Ed - Earth Science or Secondary Education Licensure.

Schedule Type: Seminar

Grading:

This course is graded on the Graduate Regular scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 792: Internship: Secondary Education English. 1-6 credits.

Provides an intensive, supervised clinical experience in an English grade 6-12 classroom in an approved school for fall and/or spring semester.

Note: The internship can be completed either in a full-time 16-week experience in one semester (for 6 credits) or in a half-time 32-week experience in two consecutive semesters (for 3 credits each semester, with registration required in both semesters). Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May be repeated within the term for a maximum 6 credits. Equivalent to EDCI 790.

Recommended Prerequisite: Completion of all licensure and endorsement coursework

Registration Restrictions:

Required Prerequisites: ((SEED 522^B) and (SEED 540^B) and (SEED 569^B) and (SEED 669^B) and (EDRD 619^B) and (SEED 677^B) and (SEED 678^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed - English or Secondary Education Licensure.

Schedule Type: Internship

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 793: Internship: Secondary Education Math. 1-6 credits.

Provides an intensive, supervised clinical experience in a math grade 6-12 classroom in an approved school for fall and/or spring semester. Note: The internship can be completed either in a full-time 16-week experience in one semester (for 6 credits) or in a half-time 32-week experience in two consecutive semesters (for 3 credits each semester, with registration required in both semesters). Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May be repeated within the term for a maximum 6 credits. Equivalent to EDCI 790.

Recommended Prerequisite: Completion of all licensure and endorsement coursework

Registration Restrictions:

Required Prerequisites: (SEED 522^B) and (SEED 540^B) and (SEED 572^B) and (SEED 672^B) and (EDRD 619^B) and (SEED 677^B) and (SEED 678^{*B}).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Graduate.

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed - Mathematic 6-12.

Schedule Type: Internship

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 794: Internship: Secondary Education Science. 1-6 credits.

Provides an intensive, supervised clinical experience in a math grade 6-12 classroom in an approved school for fall and/or spring semester. Note:

The internship can be completed either in a full-time 16-week experience in one semester (for 6 credits) or in a half-time 32-week experience in two consecutive semesters (for 3 credits each semester, with registration required in both semesters). Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May be repeated within the term for a maximum 6 credits. Equivalent to EDCI 790.

Recommended Prerequisite: Completion of all licensure and endorsement coursework

Registration Restrictions:

Required Prerequisites: ((SEED 522^B) and (SEED 540^B) and (SEED 573^B) and (SEED 673^B) and (EDRD 619^B) and (SEED 677^B) and (SEED 678^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Graduate.

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed - Biology, Secondary Ed - Chemistry, Secondary Ed - Physics, Secondary Ed - Earth Science or Secondary Education Licensure.

Schedule Type: Internship

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 795: Internship: Secondary Education Social Studies. 1-6 credits.

Provides an intensive, supervised clinical experience in a social studies grade 6-12 classroom in an approved school for fall and/or spring semester. Note: The internship can be completed either in a full-time 16-week experience in one semester (for 6 credits) or in a half-time 32-week experience in two consecutive semesters (for 3 credits each semester, with registration required in both semesters). Offered by School of Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May be repeated within the term for a maximum 6 credits. Equivalent to EDCI 790.

Recommended Prerequisite: Completion of all licensure and endorsement coursework

Registration Restrictions:

Required Prerequisites: ((SEED 522^B) and (SEED 540^B) and (SEED 567^B) and (SEED 667^B) and (EDRD 619^B) and (SEED 677^B) and (SEED 678^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment limited to students with a class of Graduate.

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed - Hist/Soc Sci or Secondary Education Licensure.

Schedule Type: Internship

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)

SEED 796: Internship: Secondary Education Computer Science. 1-6 credits.

Provides an intensive, supervised clinical experience in a computer science grade 6-12 classroom in an approved school for fall and/or spring semester. Note: The internship can be completed either in a full-time 16-week experience in one semester (for 6 credits) or in a half-time 32-week experience in two consecutive semesters (for 3 credits each semester, with registration required in both semesters). Offered by School of

Education (<http://catalog.gmu.edu/colleges-schools/education-human-development/school-education/>). May be repeated within the term for a maximum 6 credits.

Recommended Prerequisite: Completion of all licensure and endorsement coursework

Registration Restrictions:

Required Prerequisites: ((SEED 522^B) and (SEED 540^B) and (SEED 566^B) and (SEED 676^B) and (EDRD 619^B) and (SEED 677^B) and (SEED 678^{*B})).

* May be taken concurrently.

^B Requires minimum grade of B.

Enrollment is limited to students with a major, minor, or concentration in Secondary Ed-Computer Science or Secondary Education Licensure.

Schedule Type: Internship

Grading:

This course is graded on the Satisfactory/No Credit scale. (<http://catalog.gmu.edu/policies/academic/grading/>)