TEACH PROGRAM (TCH)

TCH 302 | INTRODUCTION TO MIDDLE GRADES AND SECONDARY EDUCATION | 4 quarter hours
(Undergraduate)
This course introduces middle grades and secondary education teacher candidates to the field of education and the role of teachers. It explores the expectations of and for teachers and students from fifth through twelfth grade. Students examine and critique goals and theories of middle grades and secondary education. They consider the meaning and practice of fostering equitable, intellectually rich, socially just, compassionate learning environments. Students will come to recognize the importance of, articulate the meaning of, and begin to practice critical, creative, reflective teaching practice. They also create instructional plans that reflect clearly articulated purposes and understanding of adolescents. 25 Level I Field Experience hours required. Offered during Fall, Winter, and Spring terms.

TCH 303 | CONCEPTIONS OF HEALTHY ADOLESCENCE | 4 quarter hours
(Undergraduate)
This course introduces varying conceptions of healthy adolescence, taking into account physical health and development, social and emotional health, mental health, and the contextual factors that shape healthy adolescence. Students will articulate diverse theories of what it means to be "healthy" throughout adolescence, develop instructional plans that consider the diverse interpretations of a healthy adolescence, create classroom environments that are sensitive to the health of adolescents, and communicate, model, and engage adolescents in the habits of mind necessary for healthy adolescence. Offered during Fall, Winter, and Spring terms.

TCH 311 | THE NATURE OF ENGLISH | 4 quarter hours
(Undergraduate)
This course is designed to help students to see that the field of English Studies is bigger than the component they probably identify as English (it's Literature, Writing, and Linguistics/Grammar). Students will explore the formation of the discipline up to the current day, focusing on the shifting understanding of ways of reading, writing and thinking about language. They will strive to answer the questions: "What does it mean to be a student of language and literature?" and, "What are the ways of knowing characteristics of English and Writing, Rhetoric, & Discourse majors?" In doing so, students will relate the disciplinary content of their major to their daily lives and interests and to the larger framework of human endeavor and understanding, including identifying its importance to the personal lives of middle grades and high school students. The course is a prerequisite for TCH 321. Offered during Winter term only.

TCH 312 | THE NATURE OF HISTORY AND THE SOCIAL SCIENCES | 4 quarter hours
(Undergraduate)
This course builds on the content course work students have done in the seven disciplines grouped under the heading "social sciences" (history, political science, geography, sociology, anthropology, economics, and psychology). In this class students will get further exposure to the basic concepts of the social science disciplines and consider the connections as well as differences between them. The course emphasizes how different disciplinary backgrounds lead students to bring different perspectives to their study of social phenomena and helps them see these phenomena from multiple vantage points. The course will employ a case study approach framed around social issues of interest to all seven disciplines (e.g. social control, threats, development, natural disasters). By the end of the course, students will have applied the knowledge and skills of multiple social science disciplines to evaluate social phenomena, considered the relationship and differences between those disciplines, and be prepared to enter TCH 322 where they will apply their content knowledge to inquiry and teaching in the field. Offered during Winter term only.

TCH 313 | THE NATURE OF MATHEMATICS | 4 quarter hours
(Undergraduate)
This course builds on students' mathematics understanding by emphasizing the universality of mathematics as a cultural endeavor. In it, students will explore the historical trends in mathematics and how those trends have been taught. Students will understand that, mathematics, at its core, is deductive; however, it also requires intuition. Thus, the course examines the interaction among intuition, experimentation, conjecture, abstraction, and deductive reasoning not only in the classroom but also in the everyday use of mathematics. It also examines the interplay between concrete problem-solving and generalization. Offered during Winter term only.

TCH 314 | THE NATURE OF SCIENCE | 4 quarter hours
(Undergraduate)
This course is about the nature of science and the interactions between science and society. It will build on the foundation of understandings that students already have about the processes and conventions of science developed through their years as science students to create opportunities for deeper understandings of the beliefs and assumptions inherent to the creation of scientific knowledge. These opportunities will be developed through direct interactions with professional scientists as well as through case studies and readings that illustrate the strengths, limits and pitfalls of the scientific endeavor as well as provide opportunities for students to relate science to their daily lives and interests and to a larger framework of human endeavor and understanding (e.g., relationships among systems of human endeavor including science and technology; relationships among scientific, technological, personal, social and cultural values). Cases will be drawn from different scientific disciplines as well as from modern and historic times. In this way, science students will have a better understanding of what it means to be a scientist and how science interfaces with society. The course is a prerequisite for TCH 324. Offered during Winter term only.
TCH 320 | EXPLORING TEACHING IN THE URBAN HIGH SCHOOL | 4 quarter hours  
(Undergraduate)  
(Fulfills the Liberal Studies Program experiential learning (EL) requirement). This course is an invitation to secondary education as a profession, an opportunity for students considering education as a career to explore the reality of teaching and learning a disciplinary content area in a variety of Chicago-area schools. Students will become familiar with different narratives of teaching through teacher and student biographies, testimonials, literature, film, and classroom observations. They will explore the interrelationships between, for example, popular cultural beliefs about schooling; teacher and student identities; and classroom interaction. The instructor will coordinate observations in several classrooms as the basis for intensive, guided reflective work, aimed at supporting students’ initial and subsequent efforts of developing identities as disciplinary content educators (25 hours of high school classroom observation required). Course is also an introduction to the TEACH Program. Offered during Spring term.

TCH 321 | INQUIRY & APPLICATION IN DEVELOPING ENGLISH PEDAGOGY | 4 quarter hours  
(Undergraduate)  
This course builds on TCH 311 by preparing teacher candidates to distinguish between what needs to be taught (content) and how it is taught (pedagogy), with an emphasis on understanding the historical shifts in the teaching of content and how these shifts inform teaching and learning in today’s English language arts classrooms. The course also introduces students to methods of inquiry and reflection on pedagogical content knowledge. Student will examine their own educational experience through the lens of the historical trends, focusing on how they learned and what they understood their teachers to be doing. This initial case study will serve as an introduction into case study methods. Students will also develop expertise in one of the three historical trend areas - reading, writing, and language - and examine how the trend has informed teaching and learning and shaped curriculum, pedagogy, and assessment. Students will develop a case study of a practicing teacher using the lens of the historical trend in which they are developing expertise. Offered during Spring term.  
TCH 311 is a prerequisite for this class.

TCH 322 | INQUIRY & APPLICATION IN DEVELOPING HISTORY AND SOCIAL SCIENCES PEDAGOGY | 4 quarter hours  
(Undergraduate)  
This course builds on the content knowledge students developed and reinforced in TCH 312. More, it asks them to make the shift from considering how a person prepared in the social sciences analyzes social phenomena to how such a person teaches the social sciences. Students will do this by developing two units of inquiry-based case studies that they could use in their own classrooms. As students work on these projects, they will continue to reflect on the course work they have done in the content areas as well as the instruction they see teachers delivering in their field experiences. They will contemplate such questions as: “What are the connections between the social science disciplines? How can they be taught together, creating interdisciplinary courses at the high school level? What are the differences between the social science disciplines and what does this mean for secondary pedagogy? How can teachers use inquiry with their students, making sure they have enough guidance to learn about social events but also the freedom to pursue their interests and make sense of the world on their own terms?” By the end of this course, students through readings and their projects will have advanced their learning about the nature of inquiry, its implementation in the classroom, and the connections and differences between the social science disciplines. Offered during Spring term.  
TCH 312 is a prerequisite for this class.

TCH 323 | INQUIRY & APPLICATION IN DEVELOPING MATHEMATICS PEDAGOGY | 4 quarter hours  
(Undergraduate)  
This course builds on TCH 313 by introducing students to inquiry methods to understand the teaching and learning of mathematics. Students will explore how mathematics has been and is taught by examining major paradigm shifts in mathematics education and the impact those paradigms and shifts have on pedagogical content knowledge, or knowledge of how to teach disciplinary content. Students will use case study methods to look at instructional practices and begin to articulate their own mathematics teaching pedagogy. With the completion of this course, students will have a deeper understanding of mathematical literacy and the barriers to understanding and teaching mathematics, as well as being able to identify what makes an exceptional math teacher who is able to address the needs of all students. Offered during Spring term.  
TCH 313 is a prerequisite for this class.
TCH 324 | INQUIRY & APPLICATION IN DEVELOPING SCIENCE PEDAGOGY | 4 quarter hours
(Undergraduate)

Following TCH 314, this course transitions from asking "what does a scientist do?" to a consideration of why science literacy in the general public has been so difficult to achieve. The focusing questions for TCH 324 are: "How do we teach science? What is science literacy? Why is an understanding of science important to the general public? and What are the major obstacles and strategies to achieving science literacy?" The course begins by participants self-reflecting on their own educational experiences that led to their paths in science education: what have been their successful learning strategies, how have teachers influenced their education and what have been successful (and less than successful) classroom instructional strategies? From this, students will begin science classroom observation, discussing their observations with their peers, and speaking with educators about their experiences teaching high school science and about the goals and short-comings of science education. Throughout this process, students will read seminal literature on science literacy and explore cases challenging their notions of the teacher-learner relationship and the relationship between science and society. As a result of this course, students will gain a deeper understanding of scientific literacy and the barriers to understanding teaching science as well as identify what makes an exceptional science teacher able to prepare both future scientists and a knowledgeable public. Offered during Spring term.

TCH 314 is a prerequisite for this class.

TCH 325 | LITERACY IN THE CONTENT AREAS | 4 quarter hours
(Undergraduate)

This course analyzes the relationships among reading, writing, speaking and listening. It encourages middle level and high school teachers in all disciplines to take these interrelationships into account and to plan curricula that include current teaching strategies to enable students to become better readers, writers and thinkers in their various content-areas. Language use, learning and teaching are considered from a multicultural perspective. Offered during Winter and Spring terms.

TCH 371 | TEACHING ENGLISH IN THE MIDDLE GRADES AND HIGH SCHOOL 1 | 4 quarter hours
(Undergraduate)

This course introduces students to the theoretical and practical issues of teaching the English language arts in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of reading, writing, speaking, and listening skills and sensibilities. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

(TCH 302 or SEC 364) and (SEC 321 or TCH 321) are prerequisites for this class.

TCH 372 | TEACHING HISTORY AND THE SOCIAL SCIENCES IN THE MIDDLE GRADES AND HIGH SCHOOL 1 | 4 quarter hours
(Undergraduate)

This course introduces students to the theoretical and practical issues of teaching history and the social sciences in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of the basic concepts of the seven social science disciplines. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

(TCH 302 or SEC 364) and (SEC 322 or TCH 322) are prerequisites for this class.

TCH 373 | TEACHING MATHEMATICS IN THE MIDDLE GRADES AND HIGH SCHOOL 1 | 4 quarter hours
(Undergraduate)

This course introduces students to the theoretical and practical issues of teaching mathematics in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of mathematics in all its representations. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

(TCH 302 or SEC 364) and (SEC 323 or TCH 323) are prerequisites for this class.
TCH 374 | TEACHING THE SCIENCES IN THE MIDDLE GRADES AND HIGH
SCHOOL 1 | 4 quarter hours
(Undergraduate)
This course introduces students to the theoretical and practical issues of teaching the sciences in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of the different sciences, including biology, chemistry, environmental science, and physics. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethnically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

(TCH 302 or SEC 364) and (SEC 324 or TCH 324) are prerequisites for this class.

TCH 380 | THE TEACHER AS PROFESSIONAL | 4 quarter hours
(Undergraduate)
In this course, students pull together significant elements from their prior courses as well as their experiences in the field to further their development as professional educators. Significant themes include understanding the socio-emotional needs of adolescents, the role and impact of using action research strategies to understand and adapt curriculum for students and to reflect on instructional strategies for potential professional development. Other considerations within the course include the role of teachers within building-, district-, and local communities; how teachers can continue to professionalize themselves and the profession by engaging in professional development opportunities and finding ways to model and motivate learning within relevant communities. This class is taken concurrently with TCH 381, TCH 382, TCH 383, or TCH 384. Offered during Winter term.

This class is taken concurrently with TCH 381 or TCH 382 or TCH 383 or TCH 385 or SEC 371 or SEC 372 or SEC 373 or SEC 374.

TCH 381 | TEACHING ENGLISH IN THE MIDDLE GRADES AND HIGH
SCHOOL 2 | 4 quarter hours
(Undergraduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 321 and TCH 371. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of reading, writing, speaking, and listening skills and sensibilities, with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 371, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. COREQUISITE(S): Taken concurrently with TCH 380. Offered during Winter term.

(TCH 371 or SEC 371) is a prerequisite for this class. This class is taken concurrently with TCH 380.

TCH 382 | TEACHING HISTORY AND THE SOCIAL SCIENCES IN THE
MIDDLE GRADES AND HIGH SCHOOL 2 | 4 quarter hours
(Undergraduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 322 and TCH 372. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of the basic concepts of the seven social science disciplines with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 372, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. COREQUISITE(S): Taken concurrently with TCH 380. Offered during Winter term.

(TCH 372 or SEC 372) is a prerequisite for this class. This class is taken concurrently with TCH 380.
TCH 383 | TEACHING MATHEMATICS IN THE MIDDLE GRADES AND HIGH SCHOOL 2 | 4 quarter hours
(Undergraduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 324 and TCH 374. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of mathematics in all its representations with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 374, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. COREQUISITE(S): Taken concurrently with TCH 380. Offered during Winter term.
(TCH 374 or SEC 374) is a prerequisite for this class. This class is taken concurrently with TCH 380.

TCH 385 | TEACHING THE SCIENCES IN THE MIDDLE GRADES AND HIGH SCHOOL 2 | 4 quarter hours
(Undergraduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 324 and TCH 374. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of the different sciences, including biology, chemistry, environmental science, and physics with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 374, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. COREQUISITE(S): Taken concurrently with TCH 380. Offered during Winter term.
(TCH 374 or SEC 374) is a prerequisite for this class. This class is taken concurrently with TCH 380.

TCH 380 | CAPSTONE: INTEGRATING EDUCATION & DISCIPLINARY FOUNDATIONS | 4 quarter hours
(Undergraduate)
This course is designed to help students conceptualize issues and opportunities in teaching their disciplinary content to diverse students and in different classroom contexts. Up to ten hours of community-based service/observation required. In this course, students will analyze and reflect on how teaching in their disciplines is informed by diverse cultures of schooling and youth, including the influences of economic, social, cultural, political, gender, and religious factors on schooling, educational policy and opportunity. Students will use disciplinary content to critically and creatively reflect on the teaching of that content in secondary schools. Students will be introduced to issues and ways of presenting essential disciplinary content in ways that engage diverse learners, including learners who have not been served well by formal education. Students will also develop a theory of teaching that emphasizes the intersection of disciplinary content with multicultural perspectives. Offered during Spring term only.

TCH 392 | MIDDLE GRADES AND SECONDARY STUDENT TEACHING | 10 quarter hours
(Undergraduate)
This course is the culminating experience for Middle Grades and Secondary Education Program students and requires 11 weeks of onsite student teaching in a middle school or high school content area classroom. The course requires students to be in the school full-time, participating in both in-class instruction and extra-curricular activities related to the school. Student teaching application and approval required. (10 credit hours)

TCH 395 | ASSESSMENT PRACTICES IN THE MIDDLE GRADES AND SECONDARY EDUCATION | 4 quarter hours
(Undergraduate)
This course is designed to help students conceptualize issues and opportunities in teaching their disciplinary content to diverse students and in different classroom contexts. Up to ten hours of community-based service/observation required. In this course, students will analyze and reflect on how teaching in their disciplines is informed by diverse cultures of schooling and youth, including the influences of economic, social, cultural, political, gender, and religious factors on schooling, educational policy and opportunity. Students will use disciplinary content to critically and creatively reflect on the teaching of that content in secondary schools. Students will be introduced to issues and ways of presenting essential disciplinary content in ways that engage diverse learners, including learners who have not been served well by formal education. Students will also develop a theory of teaching that emphasizes the intersection of disciplinary content with multicultural perspectives. Offered during Spring term only.

(TCH 371 or TCH 372 or TCH 373 or TCH 374) OR (TCH 381 or TCH 382 or TCH 383 or TCH 385).
TCH 401 | TEACHING AS A PROFESSION IN SECONDARY SCHOOL | 4 quarter hours  
(Graduate)  
This course is an introduction to the TEACH Program, including the College of Education's conceptual framework and teacher dispositions, and to the professional world of secondary school teaching, including the policy bodies and stakeholders that impact teaching. Within this developing understanding of the larger context of secondary education, students will begin to articulate clearly professional identities and the behaviors inherent in those identities, including their impact on student learning. Drawing on previous coursework and their growing understanding of differences in individual, ethnic, and cultural group attitudes, values, and needs, students also will learn to recognize the complexities of teaching and learning in a pluralistic society. Ultimately, students will be committed to teaching as a responsible professional who acts in an ethical and collegial fashion. 25 Level 2 field experience required. Offered during Fall term only.

TCH 402 | INTRODUCTION TO MIDDLE GRADES AND SECONDARY EDUCATION | 4 quarter hours  
(Graduate)  
This course introduces middle grades and secondary education teacher candidates to the field of education and the role of teachers. It explores the expectations of and for teachers and students from fifth through twelfth grade. Students examine and critique goals and theories of middle grades and secondary education. They consider the meaning and practice of fostering equitable, intellectually rich, socially just, compassionate learning environments. Students will come to recognize the importance of, articulate the meaning of, and begin to practice critical, creative, reflective teaching practice. They also create instructional plans that reflect clearly articulated purposes and understanding of adolescents. 25 Level I Field Experience hours required. Offered during Fall, Winter, and Spring terms.

TCH 403 | CONCEPTIONS OF HEALTHY ADOLESCENCE | 4 quarter hours  
(Graduate)  
This course introduces varying conceptions of healthy adolescence, taking into account physical health and development, social and emotional health, mental health, and the contextual factors that shape healthy adolescence. Students will articulate diverse theories of what it means to be “healthy” throughout adolescence, develop instructional plans that consider the diverse interpretations of a healthy adolescence, create classroom environments that are sensitive to the health of adolescents, and communicate, model, and engage adolescents in the habits of mind necessary for healthy adolescence. Offered during Fall, Winter, and Spring terms.

TCH 404 | THE NATURE OF ENGLISH | 4 quarter hours  
(Graduate)  
This course is designed to help students to see that the field of English Studies is bigger than the component they probably identify as English (it's Literature, Writing, and Linguistics/Grammar). Students will explore the formation of the discipline up to the current day, focusing on the shifting understanding of ways of reading, writing and thinking about language. They will strive to answer the questions: “What does it mean to be a student of language and literature?” and, “What are the ways of knowing characteristics of English and Writing, Rhetoric, & Discourse majors?” In doing so, students will relate the disciplinary content of their major to their daily lives and interests and to the larger framework of human endeavor and understanding, including identifying its importance to the personal lives of middle grades and high school students. The course is a prerequisite for TCH 421. Offered during Winter term only.

TCH 412 | THE NATURE OF HISTORY AND THE SOCIAL SCIENCES | 4 quarter hours  
(Graduate)  
This course builds on the content course work students have done in the seven disciplines grouped under the heading "social sciences" (history, political science, geography, sociology, anthropology, economics, and psychology). In this class students will get further exposure to the basic concepts of the social science disciplines and consider the connections as well as differences between them. The course emphasizes how different disciplinary backgrounds lead students to bring different perspectives to their study of social phenomena and helps them see these phenomena from multiple vantage points. The course will employ a case study approach framed around social issues of interest to all seven disciplines (e.g. social control, threats, development, natural disasters). By the end of the course, students will have applied the knowledge and skills of multiple social science disciplines to evaluate social phenomena, considered the relationship and differences between those disciplines, and be prepared to enter TCH 422 where they will apply their content knowledge to inquiry and teaching in the field. Offered during Winter term only.

TCH 413 | THE NATURE OF MATHEMATICS | 4 quarter hours  
(Graduate)  
This course builds on students' mathematics understanding by emphasizing the universality of mathematics as a cultural endeavor. In it, students will explore the historical trends in mathematics and how those trends have been taught. Students will understand that, mathematics, at its core, is deductive; however, it also requires intuition. Thus, the course examines the interaction among intuition, experimentation, conjecture, abstraction, and deductive reasoning not only in the classroom but also in the everyday use of mathematics. It also examines the interplay between concrete problem-solving and generalization. Offered during Winter term only.

TCH 414 | THE NATURE OF SCIENCE | 4 quarter hours  
(Graduate)  
This course is about the nature of science and the interactions between science and society. It will build on the foundation of understandings that students already have about the processes and conventions of science developed through their years as science students to create opportunities for deeper understandings of the beliefs and assumptions inherent to the creation of scientific knowledge. These opportunities will be developed through direct interactions with professional scientists as well as through case studies and readings that illustrate the strengths, limits and pitfalls of the scientific endeavor as well as provide opportunities for students to relate science to their daily lives and interests and to a larger framework of human endeavor and understanding (e.g., relationships among systems of human endeavor including science and technology; relationships among scientific, technological, personal, social and cultural values). Cases will be drawn from different scientific disciplines as well as from modern and historic times. In this way, science students will have a better understanding of what it means to be a scientist and how science interfaces with society. The course is a prerequisite for TCH 424. Offered during Winter term only.
TCH 413 is a prerequisite for this class.

TCH 421 | INQUIRY & APPLICATION IN DEVELOPING ENGLISH PEDAGOGY | 4 quarter hours
(Graduate)
This course builds on TCH 411 by preparing teacher candidates to distinguish between what needs to be taught (content) and how it is taught (pedagogy), with an emphasis on understanding the historical shifts in the teaching of content and how these shifts inform teaching and learning in today's English language arts classrooms. The course also introduces students to methods of inquiry and reflection on content pedagogical knowledge. Student will examine their own educational experience through the lens of the historical trends, focusing on how they learned and what they understood their teachers to be doing. This initial case study will serve as an introduction into case study methods. Students will also develop expertise in one of the three historical trend areas - reading, writing, and language - and examine how the trend has informed teaching and learning and shaped curriculum, pedagogy, and assessment. Students will develop a case study of a practicing teacher using the lens of the historical trend in which they are developing expertise. Offered during Spring term.

TCH 411 is a prerequisite for this class.

TCH 422 | INQUIRY & APPLICATION IN DEVELOPING HISTORY AND SOCIAL SCIENCES PEDAGOGY | 4 quarter hours
(Graduate)
This course builds on the content knowledge students developed and reinforced in TCH 412. More, it asks them to make the shift from considering how a person prepared in the social sciences analyzes social phenomena to how such a person teaches the social sciences. Students will do this by developing two units of inquiry-based case studies that they could use in their own classrooms. As students work on these projects, they will continue to reflect on the course work they have done in the content areas as well as the instruction they see teachers delivering. They will contemplate such questions as: "What are the connections between the social science disciplines? How can they be taught together, creating interdisciplinary courses at the high school level? What are the differences between the social science disciplines and what does this mean for secondary pedagogy? How can teachers use inquiry with their students, making sure they have enough guidance to learn about social events but also the freedom to pursue their interests and make sense of the world on their own terms?" By the end of this course, students through readings and their projects will have advanced their learning about the nature of inquiry, its implementation in the classroom, and the connections and differences between the social science disciplines. Offered during Spring term.

TCH 412 is a prerequisite for this class.

TCH 423 | INQUIRY & APPLICATION IN DEVELOPING MATHEMATICS PEDAGOGY | 4 quarter hours
(Graduate)
This course builds on TCH 413 by introducing students to inquiry methods to understand the teaching and learning of mathematics. Students will explore how mathematics has been and is taught by examining major paradigm shifts in mathematics education and the impact those paradigms and shifts have on pedagogical content knowledge, or knowledge of how to teach disciplinary content. Students will use case study methods to look at instructional practices and begin to articulate their own mathematics teaching pedagogy. With the completion of this course, students will have a deeper understanding of mathematical literacy and the barriers to understanding and teaching mathematics, as well as being able to identify what makes an exceptional math teacher who is able to address the needs of all students. Offered during Spring term.

TCH 413 is a prerequisite for this class.

TCH 424 | INQUIRY & APPLICATION IN DEVELOPING SCIENCE PEDAGOGY | 4 quarter hours
(Graduate)
Following TCH 414, this course transitions from asking "what does a scientist do?" to a consideration of why science literacy in the general public has been so difficult to achieve. The focusing questions for TCH 424 are: "How do we teach science? What is science literacy? Why is an understanding of science important to the general public? What are the major obstacles and strategies to achieving science literacy?" The course begins by participants self-reflecting on their own educational experiences that led to their paths in science education: what have been their successful learning strategies, how have teachers influenced their education and what have been successful (and less than successful) classroom instructional strategies? From this, students will begin science classroom observation, discussing their observations with their peers, and speaking with educators about their experiences teaching high school science and about the goals and short-comings of science education. Throughout this process, students will read seminal literature on science literacy and explore cases challenging their notions of the teacher-learner relationship and the relationship between science and society. As a result of this course, students will gain a deeper understanding of scientific literacy and the barriers to understanding and teaching science as well as identify what makes an exceptional science teacher able to prepare both future scientists and a knowledgeable public. Offered during Spring term.

TCH 414 is a prerequisite for this class.

TCH 424 | INQUIRY & APPLICATION IN DEVELOPING SCIENCE PEDAGOGY | 4 quarter hours
(Graduate)
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of the English language arts in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, constructing a literature search, developing a theoretical framework, and collecting and analyzing data. NOTE: Offered concurrently with TCH 481.

TCH 421 | INQUIRY & APPLICATION IN DEVELOPING ENGLISH PEDAGOGY | 4 quarter hours
(Graduate)
This course builds on TCH 411 by preparing teacher candidates to distinguish between what needs to be taught (content) and how it is taught (pedagogy), with an emphasis on understanding the historical shifts in the teaching of content and how these shifts inform teaching and learning in today's English language arts classrooms. The course also introduces students to methods of inquiry and reflection on content pedagogical knowledge. Student will examine their own educational experience through the lens of the historical trends, focusing on how they learned and what they understood their teachers to be doing. This initial case study will serve as an introduction into case study methods. Students will also develop expertise in one of the three historical trend areas - reading, writing, and language - and examine how the trend has informed teaching and learning and shaped curriculum, pedagogy, and assessment. Students will develop a case study of a practicing teacher using the lens of the historical trend in which they are developing expertise. Offered during Spring term.

TCH 411 is a prerequisite for this class.

TCH 422 | INQUIRY & APPLICATION IN DEVELOPING HISTORY AND SOCIAL SCIENCES PEDAGOGY | 4 quarter hours
(Graduate)
This course builds on the content knowledge students developed and reinforced in TCH 412. More, it asks them to make the shift from considering how a person prepared in the social sciences analyzes social phenomena to how such a person teaches the social sciences. Students will do this by developing two units of inquiry-based case studies that they could use in their own classrooms. As students work on these projects, they will continue to reflect on the course work they have done in the content areas as well as the instruction they see teachers delivering. They will contemplate such questions as: "What are the connections between the social science disciplines? How can they be taught together, creating interdisciplinary courses at the high school level? What are the differences between the social science disciplines and what does this mean for secondary pedagogy? How can teachers use inquiry with their students, making sure they have enough guidance to learn about social events but also the freedom to pursue their interests and make sense of the world on their own terms?" By the end of this course, students through readings and their projects will have advanced their learning about the nature of inquiry, its implementation in the classroom, and the connections and differences between the social science disciplines. Offered during Spring term.

TCH 412 is a prerequisite for this class.

TCH 423 | INQUIRY & APPLICATION IN DEVELOPING MATHEMATICS PEDAGOGY | 4 quarter hours
(Graduate)
This course builds on TCH 413 by introducing students to inquiry methods to understand the teaching and learning of mathematics. Students will explore how mathematics has been and is taught by examining major paradigm shifts in mathematics education and the impact those paradigms and shifts have on pedagogical content knowledge, or knowledge of how to teach disciplinary content. Students will use case study methods to look at instructional practices and begin to articulate their own mathematics teaching pedagogy. With the completion of this course, students will have a deeper understanding of mathematical literacy and the barriers to understanding and teaching mathematics, as well as being able to identify what makes an exceptional math teacher who is able to address the needs of all students. Offered during Spring term.

TCH 413 is a prerequisite for this class.
TCH 452 | RESEARCH METHODS & DISCIPLINARY INQUIRY: HISTORY AND THE SOCIAL SCIENCES | 4 quarter hours (Graduate)
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of history and the social sciences in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data. NOTE: Offered concurrently with TCH 482.

TCH 453 | RESEARCH METHODS & DISCIPLINARY INQUIRY: MATHEMATICS | 4 quarter hours (Graduate)
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of mathematics in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data. NOTE: Offered concurrently with TCH 483.

TCH 454 | RESEARCH METHODS & DISCIPLINARY INQUIRY: SCIENCE | 4 quarter hours (Graduate)
This course introduces students to education research methods and discipline-specific research and inquiry. During the first five weeks, the course focuses on basic questions, issues, and theoretical frameworks central to the purpose, conceptualization, conducting, writing, reading and using education research as a means for informing education theory, practice and policy. Candidates will be exposed to the multiple frameworks that inform education research and various methodologies employed in collecting and analyzing data. During the last 6 weeks of the course, the course focuses on research related to the teaching of the sciences in the middle school and high school and pedagogical content knowledge, including research on teaching and learning, curricula and instructional delivery, assessment, and the relationship of socio-cultural, economic, and language use to teaching and learning disciplinary-specific content. Students will develop and implement small discipline-specific research projects, identifying research questions, conducting a literature search, developing a theoretical framework, and collecting and analyzing data. NOTE: Offered concurrently with TCH 484.

TCH 471 | TEACHING ENGLISH IN THE MIDDLE GRADES AND HIGH SCHOOL 1 | 4 quarter hours (Graduate)
This course introduces students to the theoretical and practical issues of teaching the English language arts in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of reading, writing, speaking, and listening skills and sensibilities. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

TCH 402 or T&L 425 is a prerequisite for this class.

TCH 472 | TEACHING HISTORY AND THE SOCIAL SCIENCES IN THE MIDDLE GRADES AND HIGH SCHOOL 1 | 4 quarter hours (Graduate)
This course introduces students to the theoretical and practical issues of teaching history and the social sciences in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of the basic concepts of the seven social science disciplines. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

TCH 402 or T&L 425 is a prerequisite for this class.

TCH 473 | TEACHING MATHEMATICS IN THE MIDDLE GRADES AND HIGH SCHOOL 1 | 4 quarter hours (Graduate)
This course introduces students to the theoretical and practical issues of teaching mathematics in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of mathematics in all its representations. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.

TCH 402 or T&L 425 is a prerequisite for this class.
TCH 474 | TEACHING THE SCIENCES IN THE MIDDLE GRADES AND HIGH
SCHOOL 1 | 4 quarter hours
(Graduate)
This course introduces students to the theoretical and practical issues of teaching the sciences in middle grades and secondary classrooms. The course introduces candidates to research-based and theoretically grounded best practices in the teaching of the different sciences, including biology, chemistry, environmental science, and physics. Students will practice and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods, including the use of technology resources, that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. Students will reflect on their own emerging educational philosophies and theories. They will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Fall term.
TCH 402 or T&L 425 is a prerequisite for this class.

TCH 480 | THE TEACHER AS PROFESSIONAL | 4 quarter hours
(Graduate)
In this course, students pull together significant elements from their prior courses as well as their experiences in the field to further their development as professional educators. Significant themes include understanding the socio-emotional needs of adolescents, the role and impact of using action research strategies to understand and adapt curriculum for students and to reflect on instructional strategies for potential professional development. Other considerations within the course include the role of teachers within building-, district-, and local communities; how teachers can continue to professionalize themselves and the profession by engaging in professional development opportunities and finding ways to model and motivate learning within relevant communities. Offered during Winter term.

TCH 481 | TEACHING ENGLISH IN THE MIDDLE GRADES AND HIGH
SCHOOL 2 | 4 quarter hours
(Graduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 421 and TCH 471. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of reading, writing, speaking, and listening skills and sensibilities, with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 471, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Winter term.
TCH 471 is a prerequisite for this class. This class is taken concurrently with TCH 480.

TCH 482 | TEACHING HISTORY AND THE SOCIAL SCIENCES IN THE
MIDDLE GRADES AND HIGH SCHOOL 2 | 4 quarter hours
(Graduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 422 and TCH 472. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of the basic concepts of the seven social science disciplines with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 472, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. COREQUISITE(S): Taken concurrently with TCH 480. Offered during Winter term.
TCH 472 is a prerequisite for this class. This class is taken concurrently with TCH 480.

TCH 483 | TEACHING MATHEMATICS IN THE MIDDLE GRADES AND HIGH
SCHOOL 2 | 4 quarter hours
(Graduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 423 and TCH 473. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of mathematics in all its representations with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 473, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. COREQUISITE(S): Taken concurrently with TCH 480. Offered during Winter term.
TCH 473 is a prerequisite for this class. This class is taken concurrently with TCH 480.
TCH 484 | TEACHING THE SCIENCES IN THE MIDDLE GRADES AND HIGH SCHOOL 2 | 4 quarter hours
(Graduate)
This course continues students’ immersion into the pedagogical content knowledge development and practices that began in TCH 424 and TCH 474. The course provides students opportunities to continue to explore and develop research-based and theoretically grounded best practices in the teaching of the different sciences, including biology, chemistry, environmental science, and physics with an emphasis on reflective and collaborative practice. The course provides extensive opportunities for planning, using, and evaluating a variety of instructional strategies, including the use of technology resources, through teaching demonstrations and modeling and field experiences. Students will fine-tune and reflect on writing instructional objectives, developing lesson plans, designing a curriculum unit, creating a classroom environment, and implementing instructional delivery strategies and methods that meet the needs of diverse learners, including English language learners and students who speak nonmainstream dialects of English. And like in TCH 474, students will reflect on and clearly articulate orally, in writing, and through practice an educational philosophy and theory. Students will also demonstrate commitment to teaching as a professional who acts responsibly, ethically, and collegially in accordance to Vincentian personalism. 25 Level 2 Field Experience hours required. Offered during Winter term.

TCH 474 is a prerequisite for this class. This class is taken concurrently with TCH 480.

TCH 495 | ASSESSMENT PRACTICES IN THE MIDDLE GRADES AND SECONDARY EDUCATION | 4 quarter hours
(Graduate)
This course introduces candidates to theoretical and philosophical issues related to educational assessment. It addresses the range of assessments teachers will encounter in school settings, including individual cognitive and social and emotional assessments; course material, curricula, and disciplinary program assessments; and large scale high-stakes testing. The course provides candidates opportunities to explore student, program, and curricular assessment issues, including assessment methods and tools; standardized, quantitative, and qualitative assessments; formal and informal assessments; formative and summative assessments; integrated, self-, and peer assessments; cultural, social, economic, and language influences on assessments; and issues of reliability and validity in assessment. 10 Level 2 Field Experience hours required. Offered during Fall, Winter, and Spring terms.

COREQUISITE(S): Taken in conjunction with TCH 471/TCH 472/TCH 473/TCH 474 OR TCH 481/TCH 482/TCH 483/TCH 484.

This class is taken concurrently with (TCH 471 or TCH 472 or TCH 473 or TCH 474) or (TCH 481 or TCH 482 or TCH 483 or TCH 484).

TCH 525 | READING, WRITING, AND COMMUNICATING ACROSS THE CURRICULUM | 4 quarter hours
(Graduate)
This course analyzes the relationships among reading, writing, speaking and listening. It encourages middle level and high school teachers in all disciplines to take these interrelationships into account and to plan curricula that include current teaching strategies to enable students to become better readers, writers and thinkers in their various content-areas. This course will also concentrate on group process and its role in effective teaching within and across content-areas. Language use, learning and teaching are considered from a multicultural perspective. Offered during Winter and Spring terms.

TCH 471 or TCH 472 or TCH 473 or TCH 474, and status as a Graduate Education student is a prerequisite for this class.

TCH 589 | THESIS RESEARCH IN TEACHING AND LEARNING | 4 quarter hours
(Graduate)
A student writing a thesis registers for this course for four quarter hours of credit. Where the thesis research and the writing of the thesis itself are prolonged beyond the usual time, the program advisor may require the student to register for additional credit.

TCH 480 and an approved thesis proposal are prerequisites for this class.

TCH 590 | MIDDLE GRADES AND SECONDARY STUDENT TEACHING | 6 quarter hours
(Graduate)
This course is the culminating experience for Middle Grades and Secondary Education Program students and requires 11 weeks of onsite student teaching in a middle school or high school content area classroom. The course requires students to be in the classroom full-time, participating in both in-class instruction and extra-curricular activities related to the school. Student teaching application and approval required.

(6 credit hours)

TCH 591 | MIDDLE GRADES AND SECONDARY STUDENT TEACHING SEMINAR | 2 quarter hours
(Graduate)
This course must be taken concurrently with TCH 590. The seminar format provides students an opportunity to reflect on their student teaching experiences and to reach back and consider what they have learned in their teacher preparation programs and their next steps as practicing teachers. COREQUISITE(S): TCH 590. (2 credit hours)