### Telecommunication—TC

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>445</td>
<td>Digital Game Design (W)</td>
<td>Fall. 4(2-4) P.M: (TC 240 and TC 346) and completion of Tier I writing requirement. R: Approval of department. Application required. Design, architecture, and creation concepts related to the development of interactive digital games.</td>
</tr>
<tr>
<td>446</td>
<td>Advanced Interactive Media Design (W)</td>
<td>Spring. 4(2-4) P.M: (TC 201 and TC 240 and TC 346) and completion of Tier I writing requirement. R: Approval of department; application required. Advanced design and development of interactive digital media, particularly related to CD-ROM, DVD, computer kiosks, and advanced Internet applications.</td>
</tr>
<tr>
<td>447</td>
<td>Three Dimensional Graphics and Simulation (W)</td>
<td>Spring. 4(2-4) P.M: (TC 346) and completion of Tier I writing requirement. RB: A course in basic script writing and programming is required. R: Approval of department, application required. SA: TC 847 Design of objects and environments for use as 3-D graphic artwork, computer animation, and real-time, interactive virtual environments: 3-D modeling, texturing, lighting, object animation, human and facial animation, real time interaction design from gaming, simulation, and immersive virtual environments.</td>
</tr>
<tr>
<td>448</td>
<td>Special Topics in Digital Media Arts and Technology</td>
<td>Fall, Spring. 1 to 4 credits. A student may earn a maximum of 15 credits in all enrollments for this course. P.M: (TC 240) and (TC 342 or TC 343 or TC 348) R: Approval of Department, application required. Emergent topics in digital media arts and technology.</td>
</tr>
<tr>
<td>452</td>
<td>Telecommunication and Information Industries (W)</td>
<td>Spring. 4(4-0) P.M: (TC 100 and TC 200 and TC 201) and completion of Tier I writing requirement. Telecommunication and information industry issues including economic dynamics, market structures, business practices, and interfaces with other industries.</td>
</tr>
<tr>
<td>456</td>
<td>Multichannel and Broadband Telecommunication(W)</td>
<td>Fall. 4(4-0) P.M: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Telecommunication. Television and internet video in a multichannel/broadband environment. Developments in broadcasting, cable, satellite master antennae TV, direct broadcast satellite, multipoint distribution systems, telephone, internet and home video applications.</td>
</tr>
<tr>
<td>458</td>
<td>Telecommunication Management (W)</td>
<td>Spring. 3(3-0) P.M: (TC 310) and completion of Tier I writing requirement. R: Not open to freshmen or sophomores. Theoretical and practical aspects of telecommunication management including case studies.</td>
</tr>
<tr>
<td>462A</td>
<td>Wireless Networks and Applications</td>
<td>Fall of even years. 3(2-2) P.M: (TC 361) R: Not open to freshmen or sophomores. Technologies and services in the wireless telecommunications industry. Applications of wireless communications for voice and data communications, including cellular telephony and mobile data applications.</td>
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<tr>
<td>462B</td>
<td>Teleconferencing and Computer Supported Cooperative Work</td>
<td>Spring of even years. 3(2-2) P.M: (TC 361) RB: (TC 201 and TC 240) R: Not open to freshmen or sophomores. Methods of teleconferencing including assessing requirements for teleconferencing, system design and implementation, and system evaluation.</td>
</tr>
<tr>
<td>462C</td>
<td>Introduction to Electronic Commerce</td>
<td>Spring of odd years. 3(2-2) P.M: (TC 361) RB: (TC 100 and TC 201) R: Not open to freshmen or sophomores. Technologies, business models, and organizational and social implications of electronic commerce. Design of e-commerce sites.</td>
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<tr>
<td>463</td>
<td>Network Design and Implementation I</td>
<td>Fall, Spring. 3(3-0) P.M: (TC 361) R: Not open to freshmen or sophomores. Operation and management of telecommunications systems. Overview of the different systems, network configurations, current market forces and how they factor into business plans for public telecommunication networks.</td>
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<tr>
<td>464</td>
<td>Network Security</td>
<td>Spring of odd years. 3(3-0) P.M: (TC 361) Network security issues and how network security is maintained in voice data and video networks.</td>
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<tr>
<td>465</td>
<td>Network Design and Implementation II (W)</td>
<td>Spring. 3(2-2) P.M: (TC 361 and TC 463) and completion of Tier I writing requirement. R: Not open to freshmen or sophomores. Techniques for analyzing organizational requirements for private voice data and video systems. Preparing a request for proposals and bids.</td>
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<tr>
<td>466</td>
<td>Telecommunication Research Methods</td>
<td>Spring. 4(4-0) P.M: Completion of Tier I writing requirement. RB: (TC 100) R: Not open to freshmen or sophomores. Telecommunication research methods including content analysis, sampling, experiments, surveys, statistics, ratings, polling and qualitative research.</td>
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<tr>
<td>477</td>
<td>Global Media (W)</td>
<td>Fall. 4(4-0) P.M: Completion of Tier I writing requirement. RB: (TC 100) R: Not open to freshmen or sophomores. Comparison of national approaches to use of television, radio, cable, telephone, data and satellite communication, and the Internet. Development, international commerce, data flows, propaganda, impact on cultures.</td>
</tr>
<tr>
<td>490</td>
<td>Independent Study</td>
<td>Fall, Spring, Summer. 1 to 7 credits. A student may earn a maximum of 7 credits in all enrollments for this course. R: Approval of department; application required. Directed study under faculty supervision.</td>
</tr>
<tr>
<td>491</td>
<td>Special Topics in Telecommunication</td>
<td>Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. Contemporary issues in telecommunication.</td>
</tr>
<tr>
<td>493</td>
<td>Telecommunication Internship</td>
<td>Fall, Spring, Summer. 1 to 7 credits. A student may earn a maximum of 7 credits in all enrollments for this course. P.M: (TC 100 and TC 200 and TC 201 and TC 240) and (TC 310 or TC 361) R: Open only to juniors or seniors in the Department of Telecommunication. Approval of department; application required. Supervised professional experience in a telecommunication institution, business or facility.</td>
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### THEATRE—THR

#### Department of Theatre College of Arts and Letters

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>101</td>
<td>Acting I</td>
<td>Fall, Spring. 3(2-2) Improvisational exercises, creative exercises, monologue and scene study.</td>
</tr>
<tr>
<td>110</td>
<td>Theatrical Play Analysis</td>
<td>Fall, Spring. 3(0-0) Play study in relation to theatrical production.</td>
</tr>
<tr>
<td>211</td>
<td>Production Design: Scenery and Lighting</td>
<td>Fall, Spring. 3(0-6) Technical aspects of the design and construction of stage scenery and lighting.</td>
</tr>
<tr>
<td>212</td>
<td>Production Design: Costumes, Props and Makeup</td>
<td>Fall, Spring. 3(0-6) Technical aspects of the design and construction of stage costumes and props. Materials and techniques related to theatrical makeup.</td>
</tr>
<tr>
<td>290</td>
<td>Independent Study</td>
<td>Fall, Spring. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.</td>
</tr>
<tr>
<td>300</td>
<td>Production</td>
<td>Fall, Spring, Summer. 1(0-2) A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. SA: THR 300B Assisting with box office, publicity, running crew, costume shop, scene shop, or actor for department productions.</td>
</tr>
<tr>
<td>301</td>
<td>Contemporary Acting I</td>
<td>Spring. 3(0-6) RB: (THR 101) R: Open only to students in the Department of Theatre or approval of department. Intensive practicum including scene study, rehearsal and performance of works by twentieth century playwrights.</td>
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</tbody>
</table>
302 Classical Acting
Fall. 3(0-4) A student may earn a maximum of 6 credits in all enrollments for this course.
RB: (THR 101) R: Open only to students in the Department of Theatre. SA: THR 302A, THR 302B.
Experience in classical acting utilizing Greek, Elizabethan and Restoration texts.

310 Acting for Non-majors
Fall, Spring. 3(2-2) RB: (THR 101) R: Not open to students in the Department of Theatre. Emphasis on vocal interpretation and characterization. Department play attendance required.

311 Production Practicum
Fall. Spring. 5(8-10) P:M: (THR 211 and THR 212) Intensive experience participating in the production program of the department.

312 Design Media and Techniques
Spring of even years. 3(2-2) RB: (THR 211 or THR 212) Rendering and design techniques for effective costume and scenic design.

341 Beginning Play Directing
Fall. Spring. 3(0-6) P:M: (THR 101 and THR 311 and THR 110) Intensive practicum in concepts and techniques of stage directing. Stage design, movement, tableau, and analysis.

350 Plays as Film
Fall of even years. 3(2-2) Comparison of plays and musicals that are also films, with emphasis on structural changes from the play to film.

401 Contemporary Acting II
Spring. 3(0-6) RB: (THR 301 Or THR 302) R: Open only to students in the Department of Theatre. Intensive practicum including scene study, rehearsal, and performance of works by twentieth-century American playwrights such as Williams, Miller, O'Neill, Albee, and Oedets.

402 Voice Studio
Fall, Spring. 2(0-4) A student may earn a maximum of 4 credits in all enrollments for this course. RB: (THR 101) R: Open only to juniors or seniors in the Department of Theatre. Intensive practicum in advanced techniques for developing physical awareness in voice as an instrument of expression.

409 Auditioning
Fall. 2(0-4) RB: (THR 301 Or THR 302) R: Open only to seniors in the Department of Theatre. Theory and practice of techniques used for production casting in the theatre and elsewhere. Monologues, cold readings, and improvisations. Interview and resume preparation.

410 Oral Interpretation
Spring. 3(2-2) RB: (THR 101) Selecting, interpreting and performing dramatic and non-dramatic literature for an audience. Reading for sense, instant characterization through vocal expressiveness, and audience control.

411 Stage Lighting Design
Fall of odd years. 3(2-2) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (THR 211) R: Not open to freshmen. Theory and practice in lighting design and equipment. Application of light to stage production through play analysis, color theory, and the development of lighting plots.

412 Stage Costume Design
Spring of odd years. 3(2-2) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (THR 212) R: Not open to freshmen. Creating stage dress through script, color, and fabric analysis. Practical application through rendering and fabrication.

413 Make-up
Spring. 3(2-2) RB: (THR 212) R: Not open to freshmen. Theory and application of two-dimensional and three-dimensional make-up for the stage.

414 Scene Design
Fall of even years. 3(2-2) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (THR 211) R: Not open to freshmen. Creating stage setting through script, color, and architectural analysis. Practical application through rendering and technical drawing.

415 Scene Painting
Fall of even years. 3(0-6) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (THR 211) R: Not open to freshmen. Techniques in scene painting for drops, scenery units and floor treatment for a variety of theatrical spaces.

421 Creative Dramatics
Fall, Spring. 3(2-2) R: Not open to freshmen or sophomores. Techniques for developing playmaking, story dramatization and improvisational skills in young people. Emphasis on school, camp and recreational use.

422 Children's Theatre
Spring of odd years. 3(2-2) R: Not open to freshmen or sophomores. Development and application of skills for producing traditional or improvised performances for children. Projects may originate with play script and culminate in audience assessment.

431 History of Theatre to 1850 (W)
Spring of odd years. 3(3-0) P:M: Completion of Tier I writing requirement. RB: (IAH 201) R: Not open to freshmen or sophomores. Theory and practice from mythic and cultic origins to the beginning of stage realism. Emphasis on theatre as an expression of its social and cultural matrix.

432 History of Theatre since 1850
Spring of odd years. 3(3-0) R: (IAH 201) R: Not open to freshmen or sophomores. Crisis and change in theatre architecture and dramatic forms. Dominance of commercial theatre, the rise of educational theatre, and the impact of high technology.

441 Advanced Play Directing
Spring. 3(0-6) P:M: (THR 341) R: Open only to juniors or seniors in the Department of Theatre. Advanced directing skills, theories and techniques applied to the non-realistic play. Works selected from Shakespeare, the musical theatre, and other non-realistic forms used as practicum.

450 Movement Studio
Fall. 2(0-4) A student may earn a maximum of 4 credits in all enrollments for this course. R: Open only to students in the Department of Theatre or Dance Specialization. Intensive practicum in advanced techniques for developing the physical awareness and movement range of the actor.

451 Dance Studio: Classical Forms
Fall. 3(0-6) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to students in the Department of Theatre or Dance Specialization. Intensive practicum in theatre dance forms with an emphasis on performance. Selected dance idioms and specialized styles that enhance the development of the dancer as a performing artist.

452 Dance Studio: Theatrical Forms
Spring. 3(0-6) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to students in the Department of Theatre or Dance Specialization. Intensive practicum emphasizing forms of musical theatre dance, coordinated with the department's production program.

453 Labanotation
Fall of odd years. 3(2-2) R: Open only to students in the Department of Theatre or Dance Specialization. Theory and practice of labanotation with emphasis on notating movement, reading notated scores, and analyzing movement theory.

454 Choreography and Dance Production
Spring of even years. 3(2-2) R: Open only to students in the Department of Theatre or Dance Specialization. Intensive practicum in choreography. Principles and methods of dance production.

455 History of Dance to 1900
Fall of even years. 3(3-0) R: Not open to freshmen or sophomores. Overview and anthropological perspective on selected ethnic forms of dance. Emphasis on dance idioms as cultural expressions.

456 History of Dance since 1900
Spring of odd years. 3(3-0) R: Not open to freshmen or sophomores. Overview and anthropological perspective on dance. Modern dance artists and theorists. Contributions of theatrical dance forms.

490 Independent Study
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.
URBAN PLANNING  

Department of Geography  
College of Social Science  

100 The City  
Spring, 3(3-0)  
Evolution, character, dimensions and elements of cities.  

201 The Role of Planning in Urban and Regional Development  
Fall, Spring, 4(4-0)  
Contemporary urban issues, historical contexts, and the role of planning in the solutions of the problems faced by cities and their surrounding regions.  

314 Methods for Investigation of Urban Systems  
Spring, 4(3-2) Interdepartmental with Geography. P:M: (STT 201 and CSE 101) RB: (UP 201)  
Models, approaches, and techniques for urban and regional problem analysis, research, program evaluation, and project management. Application of related computer software.  

324 Visual Communication and the Design Process  
Fall, 4(2-4) P:M: (UP 201 or concurrently) R: Open only to sophomores or juniors or seniors in Urban and Regional Planning. SA: UP 231, UP 233, UP 334  
Expressing concepts in visual terms for solutions to physical planning projects: graphic techniques and reproduction. Using the design process for solving land use problems: inventory, analysis, synthesis, community input and strategies for implementation.  

343 Planning Theory: Ethics and Politics (W)  
Spring, 4(4-0) P:M: (UP 201 or concurrently) and completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in the College of Social Science. SA: UP 344  
Political impact of community decision-making on planning. Ethics and values of professional practice. Gender, equity, and diversity issues within this context will be explored.  

353 Land Use Planning  
Fall, 4(4-0) P:M: (UP 201 or concurrently) RB: (PLS 100) SA: UP 323  
Principles and techniques of land use planning, including role of social, economic and political systems, comprehensive planning, neighborhood/sector planning, practical tools for land regulation and environmentally sensitive development.  

365 Planning Law (W)  
Spring, 3(3-0) P:M: (UP 201) and completion of Tier I writing requirement. R: Open only to juniors or seniors in Urban and Regional Planning or Interdisciplinary Studies in Social Science majors. SA: UP 465  
Statutory and case law for local government planning and development regulation.  

400 Special Topics in Urban Planning  
Fall, Spring, 2 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department; open only to cast members of touring production.  
Rehearsal and participation in the various departmental touring productions.  

408 Comparative Urban Development Planning  
Spring, 3(3-0) RB: (UP 201) R: Open only to majors in Urban and Regional Planning, or Urban and Regional Planning-Urban Studies. Community planning concepts and practices, tools and techniques in different countries. Case studies.  

413 Urban Geography  
Fall, 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. R: Not open to freshmen or sophomores.  
Theories and models of urban spatial form. Underlying structures and processes. Socio-spatial dimensions of modern urbanism. Differentiation and locational conflict in residential, commercial, and industrial space.  

414 Geography of Transportation  
Fall of odd years, 3(3-0) Interdepartmental with Geography. P:M: (GEO 113) R: Not open to freshmen.  
Spatial principles of transportation. Theories of interaction, network structures, and location- allocation models. Role of transport and transportation.  

415 Location Theory and Land Use Analysis  
Fall, 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. P:M: (GEO 113 or UP 201) RB: One of the prerequisites or an introductory ECON course. R: Not open to freshmen or sophomores.  
Classical and neoclassical, static and dynamic models of industrial location and spatial organization. Land rent theory. Central place theory. Multilocational organization. Growth transmission.  

418 The Ghetto  
Fall of odd years. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. R: Not open to freshmen or sophomores. Analysis of the ghetto including its spatial organization and structure. Distribution of racial and ethnic populations. Emphasis on U.S. cities.  

425 Geographic Information Systems  
Spring, 4(3-2) Interdepartmental with Geography. Administered by Department of Geography. P:M: (GEO 221)  
Technical and theoretical issues in the design, evaluation, and implementation of geographic information systems for research and application.  

437 Urban Design  
Fall of even years. 3(1-4) R: Not open to freshmen or sophomores. Urban design theory and application of physical design principles at various scales. Design of urban open space systems, building groupings, urban linkage, and site details in studio projects.  

439 Golf Course Planning and Design  
Fall of even years. 3(3-0) Interdepartmental with Landscape Architecture. RB: (LA 342) R: Open only to seniors or graduate students in Urban and Regional Planning or Urban and Regional Planning-Urban Studies or Landscape Architecture.  
History, planning, and design of the golf course as a component of the community. Environmental, regulatory, technical, and financing issues.  

454 Local Economic Planning  
Fall, Spring, 4(3-0) Interdepartmental with Geography. Administered by Department of Geography. P:M: (GEO 221)  
The economic component of comprehensive community planning. Taxation and services delivery. Fiscal health and physical and social development of a community.  

457 Local Economic Development  
Fall, 3(2-2) R: Open only to juniors or seniors. Principles and techniques of local economic development planning. Impacts of state, federal, and local economic policies and programs.  

458 Housing and Real Estate Development  
Spring of even years, 3(2-2) Real estate development process from idea inception to asset management. Finance, organization, design and implementation. Housing, social impacts, and public sector involvement.  

463 Introduction to Quantitative Methods for Geographers and Planners  
Fall, 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. RB: Completion of University mathematics requirement. R: Open only to majors in Geography, Urban Planning, and Landscape Architecture. Quantitative techniques in the analysis and classification of spatial data.  

478 Urban Transportation Planning  
Spring, 3(3-0) Interdepartmental with Geography. R: Open only to juniors or seniors in Urban and Regional Planning or Geography or approval of department. Principles of decision-making in urban transportation planning. Demand and supply analysis, social and environmental impacts, implementation programs. Use of computer models.  

480 Internship in Urban Planning  
Fall, Spring, Summer, 2 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to majors in Urban and Regional Planning or Urban and Regional Planning-Urban Studies or Landscape Architecture. Approval of department. Supervised planning experience in a professional setting.