Communication Studies

Chair
• Kembrew McLeod

Undergraduate major: communication studies (BA)
Undergraduate minor: communication studies
Graduate degrees: MA in communication studies; PhD in communication studies
Faculty: https://communicationstudies.uiowa.edu/people/faculty
Website: https://communicationstudies.uiowa.edu/

Courses

Communication Studies Courses

Courses numbered below 5000 are intended primarily for undergraduates; those numbered 5000 and above are for graduate students. Graduate students may take courses numbered 3000-4999 for credit, with their committee's approval.

Not all courses are offered each semester.

Registration in COMM:1000 First-Year Seminar is open to first- and second-semester students regardless of grade-point average.

COMM:1000 First-Year Seminar 3 s.h.
Small discussion class taught by a faculty member; topics chosen by instructor; may include outside activities (e.g., films, lectures, performances, readings, visits to research facilities). Requirements: first- or second-semester standing.

COMM:1112 Interpersonal Communication 3 s.h.
Introduction to face-to-face communication in social and personal relationships; maximizing communicative effectiveness in relationships with knowledge about how communication functions; analysis of one's own and others' communication practices and experiences.

COMM:1117 Advocacy and Argument 3 s.h.
Public arguments as practiced in law, politics, science, and other public arenas; improvement of skills in researching, constructing, organizing, and presenting arguments on disputed subjects; analyzing and refuting arguments of others; developing a better understanding of how scholars apply tools of formal and informal logic in a variety of disciplines to improve quality of academic argument. GE: Quantitative or Formal Reasoning.

COMM:1130 The Art of Persuading Others 3 s.h.
Basic theoretical concepts of effective public communication; employ knowledge of concepts in analyzing texts; definition and influence of rhetorical situation, different elements of persuasion (message logic, appeal to feelings, character of speaker), ability of speakers to invent arguments; issues of judgment, public discourse, identity, and agency.

COMM:1168 Music and Social Change 3 s.h.
What makes popular music important for people; music's power to change culture; production, distribution, reception of popular music in cultural and historical contexts. GE: Diversity and Inclusion.

COMM:1170 Communication Theory in Everyday Life 3 s.h.
General overview of everyday life communication, theories and research techniques used to understand it; sheer depth and complexity of processes in communication that occur in everyday lives and which appear to be trivial; how to observe conversations and identify what is really happening in them; ways in which scholars explain everyday communication and how it works; applications of theoretical thinking to explain processes of everyday communication. GE: Social Sciences.

COMM:1174 Media and Society 3 s.h.
Processes and effects of mass communication; how mass media operate in the United States; how mass communication scholars develop knowledge. GE: Social Sciences; Values and Culture.

COMM:1305 Understanding Communication Research in Real Life 3 s.h.
Social scientific methods used to generate knowledge about communication processes; basic tools necessary to conduct and evaluate communication research; epistemological perspectives, research procedures, and data analysis; readings and hands-on activities.

COMM:1306 Understanding Communication: Humanistic Approaches 3 s.h.
Humanistic methods and theories used to generate knowledge about communication processes; basic tools necessary to conduct and evaluate communication research in humanities subdisciplines; epistemological perspectives, research procedures, and critical practices; readings and hands-on activities.

COMM:1816 Business and Professional Communication 3 s.h.
Introduction to business and professional communication at individual and corporate levels; individual-level topics cover organizational communication, business vocabulary, speaking and writing, professionalism and interviewing; corporate-level topics focus on marketing, advertising, public relations, corporate communications, crisis communication management, business and communication plans, proposals; guest speakers from for-profit and not-for-profit organizations.

COMM:1818 Communication Skills for Leadership 3 s.h.
Practice and understanding of essential communication skills for leadership; skills-based curriculum promoting application of knowledge; topics include relationship skills, collaboration skills, presentation skills, and writing skills; emphasis on leadership throughout each section of the course.

COMM:1819 Organizational Leadership 3 s.h.
Introduction to nature of leadership, styles of leadership that are most effective, and ways in which obstacles may be overcome in groups or organizations; different approaches to qualities of leadership, role of visions and motivation, interpersonal and decision-making skills, meeting preparation and evaluation, and related communication skills.
COMM:1830 Communication Skills for Community Engagement 3 s.h. Communication at the heart of public problems and solutions; critical 21st-century skills (writing for a general audience, facilitating dialogue); valuable community service experiences as an introduction to the interdisciplinary field of dialogue and deliberation; focus on a complex local issue, such as affordable housing, flood planning, or excessive drinking; partnering with local organizations to research a local problem, plan community-based solutions, and study the art of facilitating public discussions; topics include issue analysis, deliberative inquiry, convening meetings, and community organizing.

COMM:1840 Introduction to Media Production 3 s.h. Foundation of electronic media and digital television production skills using industry-quality technology; high-definition camera operation, audio recording and editing, digital switcher operation, nonlinear editing, studio lighting techniques, and more; introduction to questions surrounding the impact of media production on artistic expression, audiences, and society.

COMM:1845 Short-Form Media Production 3 s.h. Basics of short-form media creation including public service announcements, commercials, promotional videos, and more; entire production process from creation to production to post-production; assumes basic knowledge of studio and field production techniques, nonlinear editing. Prerequisites: COMM:1840.

COMM:1898 Introduction to Latina/o/x Communication and Culture 3 s.h. Introduction to fundamentals of communication by and about Latina/o/x in the U.S.; Latina/o/x as one of the fastest growing demographics; how Latina/o/x history, politics, and culture remain little understood despite a longstanding and growing presence in Iowa and across the nation; historical orientation; Latina/o/x social movement and protest (e.g., Chicana/o/x movements, Young Lords Organization), institutional discourses (e.g., congressional, presidential, legal discourses), and Latina/o/x in popular culture (film, television, music, sports). GE: Diversity and Inclusion. Same as LATS:1898.

COMM:2010 Communication and Organizational Culture 3 s.h. Introduction to nature, construction, and deconstruction of organizational culture from a communication perspective; examination of different approaches for understanding and analyzing organizational culture, including the lens of symbolic performance, narrative reproduction, textual reproduction, management, power and politics, technology, and globalization; prepares students to be change agents in organizations as they learn how to conduct an organizational cultural audit and how to create and implement successful change.

COMM:2011 Group Communication 3 s.h. Study of relevant theory, research, and application to increase understanding of communication in small groups; critical thinking and communication skills; individual roles in groups, creativity, leadership, decision-making, problem solving, and conflict resolution.

COMM:2015 Communication and Resilience 3 s.h. How resilience can be built via communication (conversation, storytelling, art, media, etc.) throughout the life course; considers factors that hinder and facilitate resilience efforts and provides strategies for encouraging resilience personally and professionally; includes practical application, research, and theory.

COMM:2020 Health Communication 3 s.h. How to better understand the intersections of health and communication; health communication is the study of how health information is generated and disseminated, and how that information affects and is affected by individuals, community groups, institutions, and public policy; people who understand the study of communication are in an important role, and their services are in high demand; health communication specialists work in hospital education departments, public relations, marketing, and human resource departments, in healthcare administration, in media organizations covering health issues, and in organizations that educate and support public policy and research.

COMM:2030 Sexual Communication in Personal Relationships 3 s.h. Exploration of sexual communication as a foundational activity in the development and maintenance of relationships; examination of intersection of sexual communication and personal, relational, cultural, and institutional norms and values; translation of sexual communication research into practical skills.

COMM:2040 Communication and Conflict 3 s.h. Conflict and its management as critical issues that pervade people’s personal and professional lives; complexities of conflict; forces that make conflict challenging; skills for thinking about and managing conflict more effectively; central features that define conflict; behaviors, attributions, and emotions that are manifest during conflict; formal models of conflict management and their corresponding recommendations for handling conflict.

COMM:2041 Gender, Communication, and Culture 3 s.h. Social construction of gender and gendered identities across a range of communicative settings in contemporary U.S. society, including relationships, schools, organizations, media, and social movements; how communication creates, reproduces, sustains, and sometimes challenges and changes the meaning of gender and, with that, cultural structures and practices. Same as GWSS:2041.

COMM:2042 Intercultural Communication 3 s.h. Culture defined as a system of taken-for-granted assumptions about the world that influence how people think and act; cultural differences that produce challenges and opportunities for understanding and communication; those differences from several theoretical perspectives; opportunities to examine culture and cultural differences in practical, experience-driven ways. Same as IS:2042, SSW:2042.

COMM:2044 Political Communication 3 s.h. Relationship between media, cultural politics, and the American political system; focus on advertising, campaigns, and new media outlets; ways politicians, the press, and intermediaries create and disseminate messages into mainstream culture; how people generate their own discourses of political identity and dissent, creating a robust democratic practice that is both empowering and central to the contemporary political landscape.

COMM:2045 Cultural Politics of the Environment in the US 3 s.h. Introduction to feminist and queer theories of social space; material and symbolic construction of gender and sexuality; communicating gender and sexuality in different social spaces and scales in historical and contemporary contexts. Same as GWSS:2046.
COMM:2048 Transforming Media: From Telegraph to Internet  3 s.h.
How U.S. electronic media have shaped, and been shaped by, social and cultural transformations since the mid-19th century; examination of public responses to communication revolutions; exploration of questions about media power and influence in specific historical contexts including the emergence and expansion of telegraph, telephone, broadcasting, cable, and internet; readings, discussions, and assignments investigate role of communication media in the rise of the United States as a global power and consumer culture.

COMM:2050 Politics of Popular Culture  3 s.h.
Overview of theories of culture and critical approaches to the study of popular culture; topics include broadcast television, streaming media, advertising, film, news media, video games, popular music, celebrity culture and how they intersect with race, gender, class, sexuality, and other social categories.

COMM:2054 Movements, Protest, Resistance  3 s.h.
Historical and contemporary study of social movements from a symbolic perspective (e.g., speeches, protests, propaganda, media events); social movements as interpersonal and group communication; relationships between media and social change: efficacy of individual and larger-scale forms of resistance.

COMM:2057 Introduction to Computer-Mediated Communication  3 s.h.
Theoretical and practical introduction to concepts and research in computer-mediated communication; emphasis on study of social effects of communication and information technology; factors that distinguish mediated from face-to-face interaction, theories of mediated communication, self-presentation online; internet-based relationships, online supportive communication, online communities; how the internet influences communication and how to use computer-mediated communication for self-presentation.

COMM:2060 Public Relations, Publicity Stunts, and Pranks  3 s.h.
General overview of public relations and strategic communication methods; history of deception in communication practices; development of critical thinking strategies used to critique advertising and other forms of persuasion; use of humor in mounting public relations campaigns, publicity stunts, and pranks.

COMM:2064 Media, Advertising, and Society  3 s.h.
Introduction to the critical study of advertising in the United States; advertising contextualized as an industry and as a key part of media and culture; advertising as an institution and as a series of symbols, ideas, and fantasies; how advertising works, role and function of advertising in culture and society.

COMM:2065 Television Criticism  3 s.h.
Introduction to scholarly study of television as a social institution; nature of television form and content; role of industry in creation, selection, and presentation of television programs; production conventions and textual conventions in defining the medium; application of genre and narrative theory, semiotics, political economy of media industries, and audience reception study.

COMM:2069 Black Television Culture  3 s.h.
Social and political impact of television dramas featuring people of African descent in the West; examination of production, reception, representation, and industry as it relates to the African American images that are granted tenure on television screens. GE: Diversity and Inclusion. Same as AFAM:2070.

COMM:2070 Social Media and Society  3 s.h.
Introduction to theoretical and critical issues raised by social media for communication; particular emphasis on cultural and political phenomena; topics include various understandings of social media, forms of digital communication, individual and collective identity formations via social media, online communities, and global cultural exchange; recent examples of the “viral” phenomenon and internet-born activism.

COMM:2072 African American Popular Culture  3 s.h.
Examination of global popularity and impact of African American popular culture. Same as AFAM:2072.

COMM:2074 Gender, Sexuality, and Media  3 s.h.
Mediated representations of gender and sexuality (television, film, and internet) to understand how these complex and complicated codes influence meaning of sex, sexuality, and gender; contemporary and historical examples used to engage texts that illuminate cultural conceptions of femininity, masculinity, heterosexuality, and homosexuality; cases that confuse and trouble the stability of these categories. Same as GWSS:2075.

COMM:2076 Race, Ethnicity, and Media  3 s.h.
Introduction to debates about media portrayals of race and ethnicity; focus primarily on entertainment media; use of general analytic perspectives (stereotype analysis, aesthetic analysis, history) applied to real-world examples; address one or more racial/ethnic groups in the United States. Same as AFAM:2076.

COMM:2077 Writing and Producing Television  3 s.h.
Introduction to basics of scripting and producing a conventional, three-camera television series; hands-on experience with production equipment and workshopping television scripts; students create one or more episodes of an original television series.

COMM:2078 Audio Production/Podcast  3 s.h.
Hands-on techniques of audio production, radio production, and podcasting using software and hardware tools; basic concepts of sound from how sound travels to how our brain interprets the sound; sound and mix with audio tools for quality podcast and other sound recordings.

COMM:2079 Digital Media and Religion  3 s.h.
Influences of digital media on religion and spirituality today. GE: Historical Perspectives. Same as RELS:2930.

COMM:2080 Public Life in the U.S.: Religion and Media  3 s.h.
Examination of how the U.S. came into being through specific communication practices, how religion has helped and hindered that process; religious roots of the idea of the U.S., intertwined histories of print media and religion, role of religion and secularism in public discourse; U.S. pride as a nation in which diversity thrives in public discourse; communicative acts that created and sustained this country and also mark sites of discord, conflict, and confusion from the very beginnings of the U.S. to today; how religion has been a source of national identity and national division. Same as RELS:2080.

COMM:2083 Privacy and Anonymity on the Internet  3 s.h.
Exploration of the influence of new communication technologies on privacy and anonymity; engagement with historical and contemporary readings; reaction papers, comprehensive essay, and group project.
COMM:2085 Media Industries and Organizations 3 s.h.
Trends in media industries as reflected in changes of ownership, different work conditions, media convergence, and globalization generally; focus on local, network, and cable television; examination of industry structures, business practices, economic fundamentals, and theoretical explanations of media industries in society.

COMM:2086 Global Media Studies 3 s.h.
Key developments in contemporary international communication; impact of deregulation and privatization on ownership and control of global communication infrastructure; spread of American television abroad in terms of production, texts, and reception; cultural concerns surrounding the phenomenon.

COMM:2088 Media and Democracy 3 s.h.
Exploration of relationship between democracy and mass communication; why controversies regarding mass communication are also controversies about democracy; logical relationship between democracy and mass media; roots and history of ideas of democracy, contemporary obstacles to realization of these ideas, and varied issues of present; latest developments in world of politics and media.

COMM:2089 Nonverbal Communication 3 s.h.
Introduction to theoretical study of nonverbal communication; focus on major principles and research trends; examination of role of nonverbal communication in communication as a whole; perception and interpretation of nonverbal communication (i.e., posture, eye movements, tone of voice); nonverbal behaviors (i.e., facial expression, eye movement) as used to persuade, impress, or deceive someone.

COMM:2090 Topics in Communication Studies 3 s.h.
Topics vary.

COMM:2091 Organizational Communication 3 s.h.
Explores nature and function of communication in organizations; theories of organizational communication and scholarly research related to communicating effectively in organizational settings; course will strengthen critical thinking and research skills, deepen understanding of topics related to organizing, and improve ability to communicate successfully as members and leaders of organizations.

COMM:2248 The Invention of Writing: From Cuneiform to Computers 3 s.h.
Invention of writing as one of the most momentous events in the history of human civilizations; how the use of written sign systems, notations, maps, graphs, encryptions, and most recently, computer programs have consequences that reach deeply into all aspects of people's lives; how writing fascinates and delights, fosters reflexive thinking and facilitates development of complex societies, and gives rise to institutions of social power and control; students explore the invention of writing and its consequences in broad international and interdisciplinary context. Taught in English. Same as ANTH:2248, ASIA:2248, CL:2248, CLSA:2048, GRMN:2248, HIST:2148, IS:2248, LING:2248, TRNS:2248, WLLC:2248.

COMM:2800 Introduction to Latin American Studies 3 s.h.
Cultures of Latin American countries with emphasis on cultural history and cultural production; interdisciplinary survey. Taught in English. GE: World Language and Cultural Exploration. Same as IS:2700, LAS:2700, PORT:2700, SPAN:2700.

COMM:2813 Practicum in Debate 1 s.h.
Practice of skills in research, reasoning, argument development, and argumentative performance in debate undertaken by members of the A. Craig Baird Debate Forum in preparation for and participation in intercollegiate debate competition. Requirements: participation in A. Craig Baird Debate Forum.

COMM:2821 Oral Interpretation 3 s.h.
Weekly performances to develop and define communication skills for professional careers in teaching and business; poetry, prose, monologue, storytelling, duo interpretation, reader's theatre, and demonstration speeches. Same as EDTL:2821.

COMM:2828 Experiential Learning in Communication Studies 1-3 s.h.
Structured coursework while student completes a semester-long professional work experience (paid or unpaid, part time or full time, on- or off- campus); professionalization and application of classroom learning to real-world contexts; requires professional supervision and evaluation by a manager in the organization. Requirements: GPA of at least 2.00, communication studies major, and minimum of 12 s.h. of communication studies coursework.

COMM:2829 Leadership for Civic Dialogue 1-3 s.h.
Prepares students to facilitate complex or controversial civic dialogues; contributes to leadership development; covers self-awareness, interpersonal interaction, and communication techniques; emphasizes empathy, active listening, and conflict resolution; explores learning and reasoning through "both/and" thinking, acknowledging complexities, and suspending judgment; fosters intellectual humility and dichotomous thinking; aims at enhancing civic life and collaborative problem-solving skills.

COMM:2897 Creative or research project under faculty supervision.

COMM:2899 Honors Thesis 3 s.h.
Individual research, writing, or creative production under faculty supervision. Requirements: GPA of at least 3.33, honors standing, completion of Foundations of Communication requirement, and 6 s.h. of intermediate-level coursework.

COMM:3118 Politics of Reproduction 3 s.h.
Examination of reproductive politics from historical, sociological, anthropological, and communicative perspectives; reproductive justice and bodily autonomy as key sites of feminist struggle in the United States and in global contexts; topical issues include abortion and birth control, assisted reproductive technologies, commercial surrogacy industries, LGBTQ family formation, and systems of reproductive violence. Same as ANTH:3118, GWSS:3118.
COMM:4040 Practical Research Applications: Communication and Community 3 s.h.

COMM:4044 Political Marketing: Media, Campaigns, and Persuasion 3 s.h.

COMM:4111 360 Radio Experience 3 s.h.

COMM:4131 Globalization and Culture 3 s.h.
COMM:4140 Communication and Relationships 3 s.h.

COMM:4147 Family Communication 3 s.h.

COMM:4148 Advanced Health Communication 3 s.h.

COMM:4154 Magic Machines: Technology and Social Change 3 s.h.

COMM:4157 Advanced Topics in Communication Studies 3 s.h.
COMM:4163 The Dark Side of Interpersonal Communication 3 s.h.

COMM:4168 Rhetoric of the Body 3 s.h.

COMM:4169 Feminist Rhetorics 3 s.h.

COMM:4171 Community Media 3 s.h.
COMM:4174 Communication, Technology, and National Security 3 s.h.

COMM:4183 Networking America: The Cultural History of Broadcasting 3 s.h.

COMM:5200 Introduction to Research and Teaching 1-2 s.h.
Introduction to communication studies as a field of scholarship; selection of research problems, major lines of research represented in the department, bibliographical tools for scholarship in the field; issues, practical tasks, and concerns relevant to effective college or university classroom teaching.

COMM:5230 Introduction to Rhetorical Studies 3 s.h.
Introduction to major theories, principles, and practices of rhetorical theory and rhetorical criticism.

COMM:5241 Theories of Mass Communication 3 s.h.
Major concepts, theories, schools of thought in media studies, mass communication.

COMM:5297 MA Research 3 s.h.
Preparation for master's final exam; reading and writing under the supervision of a faculty member.

COMM:5298 MA Thesis 3 s.h.
Research and writing under direction of a faculty member; leads to completion of a master's thesis.

COMM:5299 Graduate Independent Study arr.

COMM:5300 Proseminar: Preparing for the Academic Job Market 1-3 s.h.
Preparation for academic job market; development of a full academic portfolio including cover letter, curriculum vitae, research statement, teaching portfolio, job talk, strong skill set for interviewing, and statement on diversity, equity, and inclusion; includes multiple weeks dedicated to bringing a journal article to publication in an academic outlet; capstone seminar for ABD doctoral students. Requirements: successful completion of comprehensive exams and prospectus, or defense of comprehensive exams completed and prospectus defense scheduled.

COMM:6220 Health Communication Campaigns 3 s.h.
Intervention design and analysis of health campaigns; theory, practice, methods; mass media, community, organization, and interpersonal approaches. Same as CBH:6220.

COMM:6319 Criticism and Public Culture 3 s.h.
Fundamentals of criticism; practice of critical reading to engage various cultural texts (i.e., pop culture, national memorials, social movements, visual rhetoric); contemporary theories/debates that inform the art of critique (i.e., feminist theory, queer theory, critical theory).

COMM:6324 Black Feminist Rhetorics 3 s.h.
Relationships between rhetoric and race/racism; theoretical, critical, and historical perspectives on race/racism with special emphasis on rhetoric and discourse.

COMM:6335 Proseminar: Contemporary Rhetorical Studies 2-4 s.h.
Problems in contemporary rhetorical studies; may include works of Kenneth Burke, Wayne Booth, deconstructionists, feminist theorists and critics, critics of communication technologies.

COMM:6336 Seminar in Rhetorical Theory 1-4 s.h.
Topics in history and development of rhetorical theory; theory construction and application to critical practice.

COMM:6339 Seminar: Rhetoric and Culture 1-4 s.h.
Cultural theories, their utility in accounting for communication practices.

COMM:6341 Topics in Mass Communication Scholarship 1-3 s.h.
Theory and research on problems in mass communication.

COMM:6342 Critical Television Studies 3 s.h.
Introduction to canonical and contemporary readings in critical television studies; primary questions and theories associated with textual, industrial, ethnographic, and integrated approaches to studying television; how technological, economic, and cultural changes have altered television and how it is studied.

COMM:6343 Feminist Criticism 3 s.h.
Explore the rich terrain of feminist criticism within contemporary rhetorical and cultural studies; survey key interdisciplinary debates within contemporary feminist theory and criticism, trace significant trajectories within the history of feminist criticism, and consider how interdisciplinary feminist perspectives continue to shape humanities scholarship, including in communication studies and religious studies. Provides a strong foundation for exploring how feminism might meaningfully inform the art of academic inquiry and critical practice. Same as GWSS:6343, RELS:6343.
COMM:6345 New Materialisms  3 s.h.
Exploration of new strategies for rupturing persistent
dichotomies of subject/object, representation/real, culture/
nature, and active humans/passive things offered by theories
of the vitality and agency of matter; introduction to origins
of and developments in new materialisms; oriented to
interdisciplinary inquiry and application to research in the
humanities, broadly conceived; particular attention to actor-
network theory, feminism, queer theory, infrastructuralism,
and materialist theories of media. Same as GWSS:6345,
RELS:6345.

COMM:6346 The Public Sphere  3 s.h.
Theories, intellectual history, critics, contemporary issues of
the public sphere.

COMM:6350 Seminar: Mass Communication  1-4 s.h.
Topics vary.

COMM:6352 Seminar: Media Theory  3 s.h.
Topics vary.

COMM:6356 Global Media Seminar  3 s.h.
Theories and processes of globalization and cultural
implications of media globalization; local responses to
globalizing processes with reference to questions of modernity
and national/transnational identity.

COMM:6365 The Communication of Social Support 3 s.h.
Substantial knowledge base developed by scholars about
types, processes, and mechanisms of social support used
by humans to comfort one another; in-depth examination
of theory and empirical research related to communication
of social support; emphasis on types of support, verbal
person-centered messages, and various strategies for social
support; gender differences and social skills related to
comforting; online supportive communication; development of
detailed knowledge of this topic, critical assessment of extant
research, and synthesis of class readings in written format.

COMM:6371 Communication Theory  3 s.h.
Survey of primary theories of interpersonal, cultural, group,
and organizational communication.

COMM:6376 Family Communication  3 s.h.
Theory and research on communication among and between
family members (parents, children, marital partners, siblings);
quantitative and qualitative research.

COMM:6381 Seminar: Topics in Communication
Research  3 s.h.
Topics vary.

COMM:6387 Communication, Cognition, and
Emotion  3 s.h.
Theoretical and empirical work that integrates
communication, cognition, emotion; role of social cognition
in communication, theories of emotion, types of emotional
experiences; approaches to understanding emotion from
perspectives in psychology, social cognition, communication;
emotion-related issues such as influence of gender, effects of
mood.

COMM:6399 PhD Dissertation  arr.