Reclassifying Teaching Methods Based on a Comparison of Student and Faculty Experiences of Corporate Social Responsibility in the Classroom

Ms. Larkin Martini, Colorado School of Mines

Larkin Martini is a Masters student at the Colorado School of Mines studying Humanitarian Engineering and Science, with an undergraduate in Geologic Engineering from the same institution.

Ms. Jordyn MacKenzie Helfrich, Colorado School of Mines

Jordyn Helfrich is an undergraduate student at Colorado School of Mines where she is studying Petroleum Engineering with a minor in Leadership in Social Responsibility.
Reclassifying Teaching Methods based on a Comparison of Student and Faculty Perceptions of Corporate Social Responsibility in the Classroom

Abstract

Though Corporate Social Responsibility (CSR) has been identified as an important part of undergraduate and graduate curriculum for the Mining and Petroleum Departments by both industry and professors, there seems to be a difference between student identification of CSR content that could indicate a difference in teaching styles and possible effectiveness. We know very little about engineering professors’ experiences of teaching CSR to engineering students. Previous research has investigated how targeted and critical instruction in CSR has affected students’ knowledge and opinions about the connection between CSR and engineering, particularly related to how they conceptualize engineers’ responsibilities to stakeholders. Research also points to the importance of understanding how students themselves define social responsibility, as understandings can vary and differently influence their pathways through engineering [8]. Examining students’ and professors’ perceptions in the same analytic frame is crucial, because mismatches can exist between what professors think they are teaching and what students actually learn and experience.

To fill these gaps, this paper uses data from semi-structured interviews with professors and undergraduate students, as well as a student survey. The data was collected from three departments at the Colorado School of Mines: Geological Engineering, Mining Engineering, and Petroleum Engineering. These departments were chosen because they have integrated instruction in CSR into core courses. Our interviews with professors identified: how they were integrating CSR themes into the courses that they teach; why they chose to integrate CSR themes into their curriculum; how this affected their teaching; and how their CSR teaching affected student interest and learning. Our interviews with students identified: their experiences with CSR themes in their coursework; good or bad examples of CSR in coursework; and potential influences of CSR themes on their opinions of industry and job aspirations. Students also gave their overall opinions regarding the integration of CSR themes into their coursework. By comparing the viewpoints of professors and students, we identify a new classification of teaching methods and how they are perceived by students in order to help engineering educators better prepare students to critically reflect on the social responsibility dimensions of their future careers.
I. Introduction

Research has investigated how targeted instruction in Corporate Social Responsibility (CSR) has affected students’ knowledge and opinions about the connection between CSR and engineering, particularly related to how they conceptualize engineers’ responsibilities to stakeholders [1]-[5] however, there has been limited (if any) discussion of engineering faculty’s experience of teaching CSR to students. Although CSR has been identified as an important part of the undergraduate and graduate curriculums for the Mining, Petroleum and Geological Engineering Departments by both industry and professors, there seems to be a difference between student identification of CSR content and importance between the departments that could indicate a difference in teaching styles and possible effectiveness. Examining student and faculty perceptions of CSR is crucial, because discrepancies can exist between what faculty believe they are teaching and what students actually learn and experience. Similar discrepancies between faculty and students have been seen in previous studies of engineering ethics education [6]. In this paper we ask:

1) What methods do teachers choose to use most often in teaching CSR?
2) What methods are most clearly recognized by students and in what courses?
3) Given student and faculty concerns, what are previous pedagogical methods from ethics literature that may be most effective for teaching CSR?

CSR is a broad term encompassing the many ways that corporations attempt to accommodate the need for maximizing profit and taking into account the needs and wellbeing of the community and environment [1]. CSR can be used as a method for teaching macroethics to engineering students, placing it in a corporate framework that helps students understand the role of ethics when they become professionals [7]. Previous research points to the importance of understanding how students themselves define social responsibility, as their varying understandings can affect their engineering pathways differently [8]. In this paper we will compare data from three different sources: student survey data, student interview data, and professor interview data across the Mining, Petroleum, and Geological Engineering departments to 1) compare student and professor CSR definitions to better understand where students gain their understanding of social responsibility from; 2) identify four overarching pedagogical trends mentioned in professor and student interviews 3) understand the effectiveness of implicit vs explicit teaching methods through a cross-department comparison; 4) propose the use of micro-insertions in teaching CSR to address student and faculty hesitations in teaching CSR.; From our research we are able to draw 2 conclusions:

1) Lack of definition correlation implies that students receive their understanding of CSR from a wide range of sources, beyond just their departments and general education classes.
2) Teaching methods can be divided into four categories - integrated, separate, implicit and explicit - which can be used to distinguish sets of teaching techniques that may be most effective in different situations with different benefits.

II. Literature Review

We conducted a literature review to better understand the role of CSR in the larger context of ethics education, what limitations may exist to the effectiveness of CSR in engineering education, and what techniques are commonly used already in teaching similar forms of ethics education. We also looked for research similar to our own to help determine limitations of our project, and possibly compare findings. The importance of teaching engineering ethics, communication, teamwork, and CSR at an undergraduate education level has been identified as important for engineer’s success in the workplace after graduation [6], [9]-[11]. ABET has stipulated that students graduating from accredited engineering programs are expected to have “an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts,” [12]. Despite the identified importance of ethics education
in engineering, an in-depth study by Cech [10] has shown that there is actually a decline in student concern for public welfare over the course of their studies, a trend which continues into their first year of working. Cech attributes this to a culture of disengagement founded in “three ideological pillars” [10, p. 45] depoliticization, technical/social dualism, and the meritocracy ideology (for further details on these ideologies read: [13], [14]). Cech found that the need to meet accreditation requirements and be considered, “legitimate purveyors of knowledge” [10, p. 64] can put pressure on even the most ethically and pedagogically innovative of schools to fall into the same culture of disengagement. The study found that while all four of the engineering programs studied showed a decrease in the perceived importance of public welfare amongst students as they progressed through their time in school, programs perceived by students as focusing on ethical and social issues, with a general education and writing skills emphasis, and a focus on policy implications overall found ethical responsibilities more important [10, p. 62]. A more in-depth view by Smith et al. [5] into CSR and student’s desire to work for more socially responsible companies found the same decreasing trend through student survey responses.

CSR can be used as a way to incorporate what Herkert [15] defines as macroethics into engineering ethics education [7] and achieve accreditation requirements. Microethics views ethics from the perspective of the individuals and the interrelations within the profession itself. Macroethics on the other hand places ethics within the context of society and the social responsibilities associated with a profession [15]. Oftentimes ethics taught in engineering education focuses on microethics, such as whistleblowing, rather than macroethical concerns such as social justice or social responsibility [6], [7], [10], and when engineering ethics is taught it is often separated from the technical topics of the program, and considered less important than the technical topics [10]. By integrating more macroethics into engineering education, engineers can be taught a more holistic way of dealing with ethical issues that may arise [15] This does not imply that macroethics should be taught at the expense of microethics, rather literature and in some cases student interviews from previous studies have indicated engineering ethics education should be expanded to include a “bigger scale” form of ethics [6, p. 177], [15].

The most commonly suggested and used methods for ethics education include teaching codes and standards, using case study examples, and having discussions about ethics [15-19]. Overall, codes or standards, case study exposure, and discussion or debate were found at a rate of 85%, 81%, and 77% respectively over the case studies, with individual written assignments following fourth at 54% [16, p. 566]. Experiences of engineers in industry, however, indicate the practicing engineer rarely draws upon professional codes and ethics when faced with a moral dilemma, particularly in a corporate setting where corporate policies collide with professional codes [7]. Finelli et al. [11] found lectures by the professor to be the most common method of ethics instruction identified by the 3,914 undergraduate students interviewed in the study, though guest lectures followed close behind. Hess and Fore [16] completed an in-depth literature review of engineering ethics education case studies between 2000-2015 and identified several more techniques that have been practiced and evaluated. Other techniques include heuristic readings, service learning, peer mentoring, team projects, game-based pedagogy, theoretical grounding, real world exposure, and micro-insertions.

After the analysis and the highlighting of four exemplary case studies, Hess & Fore argue that Davis’ [20] micro-insertions are favorable due to how they bridge the sociotechnical gap and show that ethics, “could be seamlessly integrated while students practice and perfect their technical knowledge and skills” [16, p. 574]. Micro-insertions are a form of pervasive pedagogy where small changes are made in curriculum to help tie ethics into technical courses without sacrificing the technical content of the course. A few methods of micro-insertions are proposed in Davis [20], and individual examples are given in the paper of successful integration into thermodynamics, mathematics, and mechanical engineering courses (all of which are generally considered technical courses). These examples highlight three examples of methods of micro-insertion. The first is rewriting technical problems to include social context (contextualization), possibly with a slightly more detailed discussion when reviewing the homework assignment in class to avoid a completely “hit-and-run” approach. The second is as subtle as a change in homework policy helping highlight the importance of confidence in responses since work in the professional world will have impacts on people, and as an engineer one is required to disclose any doubts. The third is the modification of a
homework question to include multiple correct answers depending on the approach, and using this to highlight how engineers should notice problems with specifications and provide alternatives, not just work within the boundaries given. These micro-insertion examples provided by Davis [20] are not comprehensive, but they do provide a subtle understanding of how ethics integrated into technical courses can help engineers understand the social context of engineering and factor it into their work after graduation, helping bridge the gap between social and technical. A similar concept was also suggested in Holsapple et al. [6] where the authors indicate that even in non-ethics courses faculty can incorporate their own experiences of ethical dilemmas into their classes. This pedagogical technique could also address macroethical issues by helping facilitate integration of ethics and science, technology, and society as presented by Herkert [15] and Finelli et al. [11] into the general curriculum of engineering, as well as help overcome the resistance by students to CSR topics being taught in technical courses [5]. Furthermore, by facilitating the integration of ethics and technical courses, micro-insertions may help address technical/social dualism [10].

Along with understanding previously taught techniques, we looked into research similar to our own that researched differences between professor and student viewpoints. Sutkus et al. [21] conducted student and professor interviews across 10 different engineering programs to determine which curricular activities most positively affect the “ethical decision-making skills” [21, p. 1] of students. The project also identified several aspects outside of courses that influence students’ understanding of ethics categorized as co-curricular experiences and student characteristics [6], [11], [21]. The 2009 paper detailed initial findings of the project which include students showing a lack of internalization of professional ethics despite there being, “much real engineering ethics being taught” [21, p. 13], and students not seeming resistant to ethics education. As research continued, eight more institutions were included in the data set [11]. This study indicates that although students identify a high quantity and quality of ethics during their undergraduate courses, the lack of ethics knowledge amongst students indicates there is still a disconnect in student internalization of ethics knowledge. The study assesses this knowledge through responses to five ethics questions based on the Fundamentals of Engineering (FE) exams. The focus on professional ethics is also seen in the study’s conclusions where the authors call for more opportunities to “directly relate professional ethics and the technical content which students are learning” [11, p. 487]. The ethics reportedly taught by the faculty and administration in a second paper in this project also seems to focus on professional codes of ethics and other microethical topics [6]. The Holsapple et al. [6] paper, however, does acknowledge that engineering’s broader human impact (i.e. macroethics) needs to be a part of engineering education, which is also seen in the desires of the students in Holsapple et al.’s [6] interviews. In the words of one of their interviewees, “I think it would be better for them to emphasize ethics in terms of your responsibilities as an engineer, what role you have occurring there,” [6, p. 177]. This seems very reflective of the moralities derived from professional roles discussed in Smith et al. [7], and helps further indicate a necessity for including role ethics and CSR as part of engineering ethics curriculum.

Teaching CSR to engineering students acknowledges that professional engineers practice ethics within a larger societal and corporate framework with distinct roles that can affect ethical action that engineers can pursue [7]. CSR itself has many weaknesses, and has been accused of having little influence on daily corporate practices [22], [23], has not been fully internalized by many corporations [24], and is not clearly linked to engineering [15]. In response, a more comprehensive and critical education in CSR can allow engineers to critically examine their corporation’s CSR standards, the effectiveness of these standards, and how they as engineers can follow and/or improve these standards to better reflect their personal ethics and promote large scale betterment of society [7]. An example of such topics that could help students better understand a company’s CSR framework is the difference between “old” and “new” CSR practices [25]. “Old” CSR practices are predominantly philanthropically focused, and don’t influence the core values of a company. “New” CSR practices focus on win-win solutions, and change core values of the company through practices such as internalizing externalities [25, p. 415]. We are not implying that CSR is the epitome of ethics research or student learning, but suggest that by focusing on CSR we can provide a more expansive view of macroethics in engineering ethics education and potentially better prepare students to face everyday engineering ethics decisions in a corporate setting. Looking at the data we have gathered
from interviews and some of the literature review, we notice that the methods of pervasive ethics education appear to be supported by current engineering professors, though this is often referred to as “integrated” by the professors we interviewed. Micro-insertions, in particular, may help spread the pervasive method into the technical courses and enrich and contextualize the technical skills being learned through an ethical lens given the limitations expressed by interviewees.

III. Methods

Previous Research

The research in this paper is a continuation of a series of research performed at the Colorado School of Mines exploring the integration of Corporate Social Responsibility in the Petroleum and Mining Engineering departments [1]-[5]. The research includes analysis of a survey that has been modified over the course of the long-term project in response to student feedback. This survey is given to students before and after a course with a CSR intervention to better determine the effectiveness of its inclusion in the course. The project further studies courses at Virginia Tech and Marietta College, which have Mining and Petroleum Engineering departments respectively, and the Mining Engineering Program at South Dakota School of Mines and Technology in Smith et al. [4].

One limitation to these studies that we have noticed is the narrow focus of the research project to a course-by-course basis, particularly ones that include CSR integration. To help cover this we look at the Mining and Petroleum engineering departments from a birds-eye view to understand CSR integration across the entirety of the program. Along with the course specific focus, the research by Smith et al. focuses on student responses and courses with outside CSR interference. For our research project we include interviews with professors to find out pre-existing integration of CSR, rather than create CSR integrations and determine their effectiveness. Finally, Smith et al.’s research has a lack of multi-track programs for CSR integration, with one exception where the research team looked at an electrical engineering course [5]. Single-track departments are channeled towards a single industry early on in their programs, and multi-track programs start as a single path early on and gradually diverge into separate tracks around junior year more focused on the industries of the student’s choosing. To provide a counterpoint to this, we have integrated research from the Geological Engineering Department as the department is multi-track but still has correlation with the mining and petroleum industries.

Interviews

This paper uses data from semi-structured interviews with 14 professors and six undergraduate students in three departments at Colorado School of Mines: Mining Engineering, Petroleum Engineering, and Geological Engineering. Faculty interviews represent about 25% of the Mining Engineering faculty, 35% of the Petroleum Engineering faculty, and 25% of the Geological Engineering faculty. These percentages are approximate since one of the Geological Engineering professors interviewed is currently a graduate student on track to become faculty after graduation and teaches in both the Geological Engineering and Petroleum Engineering departments, and one of the professors is part of the Mining Engineering department despite teaching Geological Engineering. The Mining and Petroleum Departments were chosen because of their direct path into specific industries and earlier attempts at integrating CSR instruction. As a counterpoint, the Geological Engineering Department was chosen for two reasons: 1) its direct relationship to the other two departments, as many geological engineers end up in the mining and petroleum industries; and 2) its lack of focus on industry until late junior and senior level courses, giving students a much wider range of industries to choose from after graduation compared to the other two departments. Due to the scope of this project, analysis of other departments such as Environmental, Civil, and Mechanical Engineering was not performed, however future research into these departments may be beneficial. When choosing students to interview we used a snowball sampling method from students and professors we
already knew in the Mining, Petroleum and Geological Engineering Department. Professors were often chosen based on previous interactions, or information learned in the student survey and interviews. Thirty to 90 minute interviews were conducted primarily one-on-one over the Zoom video conferencing platform, with a few of the initial interviews being conducted by both researchers to establish continuity in the interviewing method. Professors and students were then given pseudonyms to anonymize data. In order to limit bias, it was decided that the first author would conduct interviews with members of the Petroleum Engineering Department and the second author would conduct interviews with members of the Mining Engineering Department due to the first author being a previous member of the Mining Department and the second author being a member of the Petroleum Department. Both authors conducted interviews with members of the Geological Engineering Department.

Student interviews often began by the interviewers learning why the interviewee wanted to go into their given engineering field, and why they ultimately chose to attend Colorado School of Mines. This was followed by questions about the interviewees’ study experience, and then more in-depth questions about CSR in that experience and how the interviewee defines it (for list of questions see Appendix A). Our student interviews gave us valuable information about the student’s perception of CSR in the Petroleum, Geological and Mining Engineering Departments. Students told us their opinions regarding the role that CSR themes should play in Petroleum, Geological and Mining Engineering curriculums.

Professor interviews began in a similar fashion. Introduction questions were followed by questions about the interviewees teaching experience at Colorado School of Mines, and then more in-depth questions about CSR in that experience and how the interviewee defines it. We were able to ascertain why professors chose to incorporate CSR themes into their classes and how they incorporated these themes. Professors also told us their opinions regarding the role that CSR themes should play in petroleum and mining engineering curricula (for list of questions see Appendix A). In later interviews professors were asked more explicit questions about the patterns seen in previous interviews.

Survey

We developed a completely anonymous survey based on the questions used in the student interviews to help get a larger scale sense of the students’ views of CSR education. The survey was distributed using the Google Forms platform to Mining, Petroleum, and Geological Engineering students between November 4th and 11th, 2020 via department emails in order to reach a wider audience than with only interviews and give more flexibility to students who may have difficult schedules due to coursework and other commitments. The survey data allowed us to see response trends for some of our key research questions. When creating the survey, a mix of multiple selection style and short answer questions were used to see trends and gain a deeper understanding of responses (see Appendix B for specific survey questions).

Coding

In order to synthesize and evaluate data that was collected in the surveys and interviews, a coding method was used to identify key patterns and themes in the research data. An approach based on Grounded Theory was used to aid data analysis [26]. The coding method involved color coding interview notes in order to identify patterns. We first coded their notes separately, then reviewed their codes together. The goal of this was to both ensure coding consistency, and ensure no important information was missed or miscoded. When comparing student and professor definitions of CSR and associated terms, a second coding method was used to specifically look for commonly used words or terms. A spreadsheet was used to track what words or terms were used, and correlate who said them.

Limitations

It is important to note that due to the small sample size of students and professors from each department, we cannot make any generalizations about the department itself, just about the data we
collected. The trends noted were mostly to identify possible areas of interest regarding differences between student learning and professor teaching of CSR. Furthermore, this means any connections between student interviews and student surveys are tentative. The professors interviewed were often known to teach CSR material, which creates a bias towards CSR representation in the courses they speak about. In fact, we had several interviews turned down because the teacher taught a “technical” course, and didn’t think that CSR applied or didn’t want to sacrifice the space in the technical courses. Therefore, it is important to ensure any recommendations made address this concern. All the professors also have industry experience and many of the courses they teach reflect this. Opinions could differ for professors without industry experience and teaching less industry-focused courses. The worry that technical material would be sacrificed is also reflected in the student interviewees as well, with students more familiar with or more interested in CSR being those interviewed. For any future research into this topic a wider range of interviewees should be approached, and include professors teaching technical courses as well as students who do not show an external interest in CSR related topics.

For the survey data, the high response rate of graduate students in the Mining Engineering Department may skew the data relative to the undergraduate interviews. We believe with a difference between teaching styles for graduate students mentioned by some professors and the higher likelihood of industry experience the exposure of graduate students to CSR data may be very different both in mode and quantity to undergraduate students of the same department, though this statement should be further looked into in future research to be certain. Since the survey did not include information on whether or not the respondent’s undergraduate education was completed at Colorado School of Mines, statements made about any undergraduate learning cannot be assumed to be connected.

IV. Data and Initial Correlations

Professor Interview Data

<table>
<thead>
<tr>
<th>Table 1: Interviewed Professors’ Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Engineering Department</td>
</tr>
<tr>
<td>Prof. Hester</td>
</tr>
<tr>
<td>Prof. Myers</td>
</tr>
<tr>
<td>Prof. Roman</td>
</tr>
<tr>
<td>Prof. Abbott</td>
</tr>
<tr>
<td>Prof. Davis</td>
</tr>
<tr>
<td>Geological Engineering Department</td>
</tr>
<tr>
<td>Prof. Sellers</td>
</tr>
<tr>
<td>Prof. Garcia</td>
</tr>
<tr>
<td>Prof. Ward</td>
</tr>
<tr>
<td>Prof. Kelly</td>
</tr>
<tr>
<td>Prof. Cobb</td>
</tr>
<tr>
<td>Petroleum Engineering Department</td>
</tr>
<tr>
<td>Prof. Edwards</td>
</tr>
<tr>
<td>Prof. Powell</td>
</tr>
<tr>
<td>Prof. Tucker</td>
</tr>
<tr>
<td>Prof. Friedman</td>
</tr>
</tbody>
</table>

Fourteen professors were interviewed across the departments: four from Petroleum Engineering, five from Mining Engineering, and five from Geological Engineering (Table 1). Two Mining professors, Professors Hester and Roman, and two Petroleum professors, Professors Powell and Tucker, were interviewed earlier in Fall 2020 and used to make a preliminary analysis before the other professors were interviewed in the late Fall and early Spring semesters. All professors interviewed worked in industry before teaching at Colorado School of Mines, showing the strong ties between academia and industry in these fields. Therefore, the foundation of the professors’ CSR definitions comes from personal industry experience combined with academic experience. It is also important to note that industry and academia are closely linked in all three of the departments researched, particularly in Mining and Petroleum Engineering. There are two predominant sets of data for analysis from the professor interviews: 1) what terms professors associate with CSR (Figure 1), and 2) what methods these professors use and think are most effective for integrating CSR into the department curriculum (Figure 1). The first set of data allows for a comparison to student responses to better understand where students form their personal definitions of CSR from, and the
second set of data allows for a possible comparison of teaching styles to student learning across the two departments. All Mining Engineering data visualization is in various shades of blue, Petroleum Engineering in shades of green, and Geological Engineering in shades of purple.

Interviewees were explicitly asked to name the terms they associated with CSR, and were not provided a list. Other terms were determined through mentions of CSR practices throughout the interview during the coding process. The terms professors most commonly associated with CSR were environment, sustainability, and social license to operate. However, these were only about 50% of the respondents showing that the faculty has a diversity of views surrounding CSR, and no topic was 100% agreed on by any department, which is consistent with the diversity of CSR definitions and topics found in literature [1], [25], [27]. None of the professors mentioned public relations, unlike the students, but they did mention several other “old” CSR concepts such as educating the public, building infrastructure/schools, and compliance. There seems to be a slightly higher association of social license to operate terms in the Mining Engineering professors and students, and slightly higher correlation of health and safety in the Petroleum Engineering student survey responses and professor interviews, but not a significant amount. A similar trend can be seen with the association of the term “ethics” with CSR in Geological Engineering.

All professors agreed that CSR is an important topic to teach in undergraduate curriculum, though suggested methods for teaching these topics vary. Four overarching terms were identified in our initial interviews: integrated, separate, implicit, and explicit, which from here will be referred to in its entirety as the ISIE classification (Figure 2). By classifying pedagogy in these terms, it helps us to understand overarching themes in teaching styles and how easily identifiable CSR topics are for students, as well as how in-depth into CSR topics the techniques go. “Implicit” in this case indicates more subtle methods of mentioning CSR, not using the term directly, and not making it the centrally focused topic. Examples include personalization, micro-insertions and CSR aspects as part of a larger project. “Explicit” methods refer to the more traditional methods where the class is focused on CSR and CSR related topics specifically instead of integrating them into other topics taught. Examples include assigned readings on CSR topics,
essays on CSR, and CSR specific discussions or lectures. Professor Powell discussed how CSR needs to be both “explicit” and “implicit”. Explicit teaching opens student’s minds up to the concept of CSR and allows for students to better recognize the implicit comments, otherwise the implicit comments may go over students’ heads. Professor Powell followed by discussing how core classes may benefit from having more explicit CSR content with the other, more technical courses using implicit teaching.

![Figure 2](image-url): A visualization of the relationship between explicit, implicit, integrated, and separate teaching methods

“Integrated” indicates the topic being taught regularly throughout a course and a variety of topics, including technical, much like the pervasive method seen in the literature. Professor Hestor discussed how it is important to integrate CSR into what is being taught, and how his introductory courses have CSR and Social License to Operate (SLO) units. Professor Hestor also highlighted how it is important to teach it early on in the curriculum, integrating CSR into other discussions and design parameters. In support of this concept, while Professor Tucker didn’t use the term integrated directly, they stated that while ethics can be taught on its own, it needs to be taught in everything we do. “Separate” indicates separate courses and lectures that go more in depth into what CSR is, and focus entirely on the topic. Professor Abbott, from the Mining Engineering Department, described using a mixture of both “explicit” and “implicit” methods when teaching CSR. They liked to use case studies to help students understand how CSR concepts relate to industry. They also integrated CSR themes into course projects. Professor Abbott specifically mentioned the importance of CSR in mine design and feasibility studies. When having students complete a mine design project, they would incorporate CSR themes, such as community engagement, into the project. When asked about how learning about CSR impacted student interest in mining, Professor Abbott said they wanted students to graduate with an understanding that, “CSR activities are just as essential to a mining project as buying drills.” Even when teaching CSR using explicit methods, Professor Abbott wanted students to view CSR as an integrated part of their curriculum and something that will be crucial to them in industry.

Similarly, Professor Garcia touched upon the idea of integrated and implicit while discussing how students can still learn CSR ideas without calling it CSR by adding social and community restraints to projects. Professor Garcia prefers to teach implicitly, as they don’t want students to write off the idea as social science, but rather see it as a part of the project. We view the ISIE classification system as a spectrum, and acknowledge that there is flexibility depending on the specifics of how the teaching method is used by
professors. Using personal experiences with these techniques and how professors and students reference them, we have attempted to understand different teaching techniques relative to each other, and in some cases acknowledge where techniques are similar in position such as CSR readings, reflections, and essays (Figure 2). The four categories of the ISIE classification can be combined in various ways that were reflected in both our research and experiences as students. General education curriculum, such as NHV, and non-technical electives such as environmental philosophy and the CSR specific course, would be considered explicit and separate courses. CSR specific lectures, readings, and assignments in technical and design courses would be explicit and integrated. Contextualization of problems and other micro-insertions, integration into course projects, and some types of guest lectures would be implicit and integrated. We do not see any examples of implicit and separate in our research, signaling that implicit methods are always integrated with engineering content (Figure 2).

![Mentions of Explicit vs Implicit Integration](image)

**Figure 3**: Mentions of broad categories of CSR integration by professors during interviews

The data shows professors from all three departments mentioning explicit and implicit methods of teaching CSR (Figure 3). Our first several interviews did not ask about the differences or preference of the professor for these methods specifically, but our later interviews did as a method of asking the professor’s opinion of using this terminology. Overall, nine professors indicated that they believe CSR should be integrated into the curriculum, and only three indicated it should be separate. Integration was slightly more prevalent with Petroleum and Geological Engineering professors. It is important to note that the professors who indicated a separate class would be helpful also supported it being integrated throughout the program, but thought that the separate course would help with more in-depth understanding. Explicit methods of teaching CSR were mentioned slightly more than implicit, eight vs six, however, much like separate and integrated methods, there is overlap between professors who mentioned explicit and implicit methods. There were slightly more Mining professors that mentioned explicit methods.
Similar to what was seen in the literature, case studies and lectures seem to be the most popular methods of teaching CSR, with projects and various forms of micro-insertions (contextualization, personalization, tangents) being the next most popular (see Figure 4). The distribution of these techniques into the implicit/explicit categories varies depending on how it is approached by the professor. For example, when asked about what teaching methods they used, Professor Myers, also from the Mining Engineering Department, gave very specific examples of explicit and implicit teaching methods they used in a course they previously taught. Students would complete a stakeholder mapping exercise and a stakeholder engagement plan. During that activity, the term CSR was used and discussed, making it an explicit teaching method. Students also completed a role play activity where they are asked to take on the role of stakeholders in a project, such as community member, regulator, consultant, and engineer. Students then debated a mining problem and discussed what their needs are. This activity takes a much more implicit approach to CSR. It emphasizes the importance of listening to stakeholders and recognizing their needs, however the term CSR isn’t explicitly used. Similar role play exercises were used by Professors Edwards and Garcia as a way to teach ethics in their technical courses. Professor Edwards used a more implicit method of stakeholder mapping, integrating it into the project design for the class, and used a roleplaying-based technique with outside aid to make the stakeholder mapping more realistic. This allowed for in-person conversations with the project’s “stakeholders”. In a course previously taught by Professor Garcia, they would use a method of roleplaying that was more similar to Professor Myers, where students take on the role of various stakeholders for a debate. This method is much more explicit, as mentioned previously. A
follow up with the students in this class by Professor Garcia showed that they believed it increased their empathy for the various stakeholders.

For other implicit/integrated methods Professor Abbott from the Mining department said they included elements of CSR in their mine design projects when they taught the Mine Design course, much like Professor Edwards in the Petroleum Department. Professor Abbott indicated that it was important for students to not only recognize that CSR is an essential part of mine feasibility, but also see the costs associated with CSR practices. This approach to teaching CSR contrasts the explicit/separate methods mentioned by Professors Roman, Cobb, and Edwards (from the Mining, Geological, and Petroleum Engineering departments respectively) when they discussed the CSR specific course at Colorado School of Mines and how it should be a mandatory course. Professors Cobb and Edwards further pointed out that you need more than just CSR, with Professor Edwards referring to sustainability, in particular the United Nations Sustainable Development Goals, as an important topic to teach, and Professor Cobb saying, “you need to start with the social responsibility and add the corporate in later.”

**Student Interview Data**

<table>
<thead>
<tr>
<th>Table 2: Interviewed Students’ Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Engineering Department</td>
</tr>
<tr>
<td>Hunter</td>
</tr>
<tr>
<td>Sam</td>
</tr>
<tr>
<td>Geological Engineering Department</td>
</tr>
<tr>
<td>Reece</td>
</tr>
<tr>
<td>Charlie</td>
</tr>
<tr>
<td>Petroleum Engineering Department</td>
</tr>
<tr>
<td>Alex</td>
</tr>
<tr>
<td>Bailey</td>
</tr>
</tbody>
</table>

Six students were interviewed to get a deeper understanding of students’ views of CSR education: two from Mining Engineering, two from Petroleum Engineering, and two from Geological Engineering (Table 2). The two Mining Engineering students had taken the CSR specific course offered at Colorado School of Mines, while none of the other students interviewed did. For each department, one student interviewed identified as male (Sam, Charlie, and Bailey) and one student identified as female (Hunter, Reece, and Alex). All students were in their fourth year except for Bailey in the Petroleum Engineering department who was in their second year. All interviewees said they knew they wanted to be engineers before university, though the specific type was not always certain. Alex and Bailey both seemed to be further influenced by time with industry in internships or professional societies. One of the first CSR related questions asked to each student was “How would you define or describe corporate social responsibility?” Alex, Hunter, Sam, Reece, and Charlie defined CSR along the lines of the ethical responsibilities of a corporation or industry, with Hunter and Sam both including a social aspect, and Hunter, Sam, and Reece all including an environmental aspect to their definitions.

Alex: “You have certain responsibilities that you have to uphold both in your public image and your public interactions as well as the inner workings of your company.”

Hunter: “Corporate social responsibility is the actions and activities of a corporation for the express purpose of creating a social, environmental, or societal good.”

Sam: “CSR is when a company tries to do good in the realms of the social, environmental, and economic in order to operate effectively…the business case for doing good.”
Reece: “We all have a responsibility, like the big industries have a responsibility as well, to keep the environment and the health of everyone in mind.”

Charlie: “Responsibility of the industrialist to do the right thing, protect the environment, protect the community he or she is involved with, and also some social justice would go into this as well and probably one of the responsibilities of being a good engineer and industrialist and not be corrupt.”

Bailey did not give a direct definition for CSR, however they heavily associate the term with having a social license to operate, which they defined as “the social permission that is granted to the company by your geographic neighbors to perform your operations. Not really enshrined in laws, but enshrined in practicality”. Both Petroleum students associated public image and relations with CSR, which is consistent with the survey response data, as did one of the mining students, Sam. Like Bailey, both Mining students associated CSR with a social license to operate, however, they did not seem to do so as strongly. Alex, Bailey, Reece, and Charlie all associated health and safety standards with CSR. While almost all students mentioned or associated the environment in some way, Reece heavily associated environmental aspects with CSR, including environmental law, environmental ethics, and other environmental issues.

When discussing CSR themes in the curriculum, all six students said that they see evidence of CSR themes in their classes, though Reese had not seen any examples in their department related courses, and Charlie, the other Geological Engineering student, also saw limited evidence in department courses. Hunter and Sam, both Mining Engineering students, gave very similar examples of classes where they have learned about CSR topics. They both noted that the term CSR isn’t always used ‘explicitly’ in classes, however both students did say that ‘social license to operate’ is discussed frequently. Hunter added that they liked that the term CSR isn’t always used explicitly, saying that it made the discussions feel “new” rather than repetitive. When further prompted about CSR themes in coursework, Hunter said that case studies are often used as a teaching method. They noted that they often depicted situations where things went wrong, and showed a “cautionary tale” of what happens when CSR isn’t used. When asked if they wished to learn more about CSR themes in their major-specific classes, Hunter and Sam both said that they thought things were good. However, it is important to note that Sam suggested that a specific CSR course should be required for their department. Unlike Sam and Hunter, Alex and Bailey had very different responses about CSR in their courses despite being in the same department. While Alex said that CSR themes were only taught in a few classes, Bailey said that CSR themes were taught “all the time in petroleum classes.” Similar to Hunter and Sam, Alex noted that the term CSR isn’t always ‘explicitly’ used in classes. Alex expressed a desire to learn more about CSR themes in major-specific classes, specifically stating that CSR should be integrated into all classes since it is so important in industry, while Bailey did not. We thought this was an interesting discrepancy, especially given that Alex has taken many more petroleum engineering classes than Bailey. Perhaps this has something to do with Bailey’s negative feelings towards CSR. When asked if they had any ideas about how professors could teach more CSR themes, Alex said that, “being subtle and integrating it into coursework would be good.” As mentioned previously, while Reese had seen CSR topics in their courses, they had not seen them in the department specific courses, but in the Humanities Arts and Social Sciences courses such as NHV and Environmental Philosophy. This is consistent with Charlie’s response and the survey data for Geological Engineering students. Charlie did note that some of the topics are seen in the Geological Engineering Senior Design courses that they had taken, and after some more in-depth thought could name a few smaller talks on CSR related topics, but not necessarily CSR specifically. Reese supported the idea of contextualizing problems in the real world, while Charlie mentioned CSR education should be “discreet”. Similar to Sam, Reese suggested that a discipline specific ethics course should be required by every department.
**Student Survey**

Twenty students from the three departments responded to the survey: eight Mining, six Petroleum, and six Geological Engineering students (See Figure 5). The original data included two duplicates for a total of 22 responses, however, the two duplicates were removed for the data analysis. Furthermore, there was a high quantity of graduate student responses in the mining department, so while there may be some visible trends, Mining Department connections between undergraduate student views and professor responses are tentative.

![Figure 5: Distribution of departments survey respondents were from, and whether they were graduates or undergraduates](image)

The survey included a multiple selection question asking students, “Which of the following would you consider corporate social responsibility (CSR)?” (See Figure 6). We used previous experiences and literature [25], [27], to help determine the terms, however, left an “other” option in acknowledgement that there were several that we were missing. The most agreed upon association from the student survey was “Community Health and Safety, which all students except one in the Mining Department agreed with, and was followed by “Community Outreach” with all but one Petroleum and one Mining student associating it. For the Geological Engineering students three associations had less than 50% association; “Scholarships for Future Employees” (2/6 responses), “Scholarships for the Community” (0/6 responses), and “Fundraising” (2/6 responses). The authors of this paper propose that this could be due to the nature of the Geological Engineering department being less industry focused in early years than the other two departments. “Fundraising” also had a 50% or less response rate from the Petroleum and Mining Engineering students. Geological Engineering students also showed a proportionally lower view of “Educational Events” as part of CSR than the other two departments, with only half of Geological Engineering students associating the term.

The lowest three associations for the Mining Engineering Department were “Sustainability”, “Fundraising,” and “Scholarships for Future Employees”. None of the associations for the Mining Engineering students had 100% agreement, unlike the Geological and Petroleum engineering departments. This could be due to the responses from the Mining students including a far higher portion of graduate students with a more diverse set of backgrounds and industry experience compared to undergraduate students. No term in the Petroleum Engineering student responses received less than a 50% agreement, with
the only 50% agreement being “Fundraising”, and the rest having a 5/6 or 6/6 response rate. In addition to the pre-given responses, two additional responses were given: “Appropriate gender and racial representation” and “Some degree of community involvement in politics and planning around a project”.

Figure 6: Survey data collected from Petroleum, Geological and Mining Engineering students in response to the multiple selection question “Which of the following would you consider corporate social responsibility (CSR)?”

The next two questions from the survey that we analyze in this paper are: “Where do you think you first heard about corporate social responsibility?” and “Have you heard about CSR topics in your classes and if so, which professors taught the course?” (Figures 7 & 8 respectively). Figure 7 indicates that department courses are not the predominant introduction to CSR; however, this could be due to most students not starting department specific classes until their sophomore year, and having several introductory courses that mention the practice, including the freshman introductory Nature and Human Values (NHV) course (see Appendix C for course description). This is also seen in the responses to the second question where three Geological Engineering and one Petroleum Engineering student saw this topic in their NHV courses. Mining Engineering had the widest spread of professors mentioned, though some specific professors were also mentioned in the Geological and Petroleum Engineering responses. Ten different Mining professors were cited in response to this question, and only two different Petroleum professors and two different Geological Engineering professors were cited. Interviewed professors were separated, and remaining mentioned professors were grouped by department. The “other” category was used for other elective classes at Colorado School of Mines, as well as a few vague answers. It is also interesting to note the one Petroleum Engineering technical course mentioned by a Geological Engineering student displaying the interdisciplinary nature of the department.
Figure 7: Survey data collected from Petroleum, Geological and Mining Engineering students in response to the question “Where do you think you first heard about corporate social responsibility?” Note: Responses were short answers and data was sorted into categories.

Finally, we asked the question “Do you wish there were more CSR themes incorporated into your classes?” (Figure 9). Respondents were asked to elaborate on why they chose “yes”, “no”, or “maybe”. Of the Mining Engineering students who responded “no”, one explained that since Colorado School of Mines is a technical school, students should not “have ethics shoved down our throats even more than it already is”, another student noted a lack of faculty experience with CSR and that the department has the wrong course structure to facilitate greater inclusion of the topic, a third student said that CSR is already
incorporated well, and the last respondent thinks CSR, “should form an organic part of every course in my major rather than be in a separate silo”. For Mining Engineering students who answered “maybe”, three of the respondents thought it depended on how the CSR topic was introduced, if it was related to the course content, if it was well integrated into preexisting topics, and how well academic and industry views are combined. The last respondent who answered “maybe” elected not to elaborate. For the petroleum students the single “no” response stated:

“It is pressured enough outside of classes by the media in terms of oil and gas operators. I don’t need to hear how evil I am for pursuing a career in oil and gas!”

The single “maybe” response cited the importance of CSR but was unsure if it was important to include in coursework. Finally, the three “yes” responses cited the importance of CSR in industry, and that it is therefore an important topic to understand before entering industry. The same trends and reasoning are seen in the Geological Engineering student responses as the petroleum. It is also interesting to note from the strong, visceral reactions to CSR education in the survey when responding “no” that CSR may be equated with general ethics education at Colorado School of Mines by respondents, which is taught freshman year in a separate and explicit manner.

![Bar chart: Do you think your department should include more CSR?](image)

Figure 9: Survey data collected from Petroleum, Geological and Mining Engineering students in response to “Do you wish there were more corporate social responsibility themes incorporated into your classes?”

V. Discussion and Suggestions

The lack of correlation between department students and professors seems to imply that students are receiving their understanding of CSR from a wide range of sources, beyond just their engineering courses, and subsequently making their own definitions. This supports the Finelli et al. [11] and Sutkus et al. [21] conclusion that students learn ethics from both curricular and co-curricular sources, and therefore to understand how students learn ethics, both types of activities must be studied. However, we believe that department specific CSR can serve to ground ethics in the discipline of study chosen by the student. This better prepares students for ethics based on the professional roles they will be serving in after graduation as suggested by Smith et al. [7]. Such a desire was seen in both student interviews from literature [6] and in our own student interviews such as with Reece.

The most visible correlation in our data is between the very large number of individually named Mining professors (Figure 8), and the larger number of mining professors citing explicit teaching methods
We did attempt to identify correlations between the large number of individually named Mining professors (Figure 8) and the individual pedagogy techniques (Figure 4), however we were unable to identify a clear trend. This may promote the use of the larger ISIE Categorization, particularly in the evaluation of teaching effectiveness, as it looks at groups of pedagogical techniques based on similarities, rather than individual techniques. We are uncertain if explicit methods merely increase the student’s abilities to identify CSR or actually increase their retention of CSR concepts. This is also interesting since the Mining Engineering students interviewed specifically said that CSR wasn’t always explicitly mentioned. Another possibility, therefore, is that because so many of the Mining student responses to the survey were from graduate students, they had more experience identifying CSR topics, and were therefore more able to indicate where they had seen these topics in their courses. This combined with the suggestion by a few professors and Mining Engineering student Sam may indicate that a required CSR course could help students understand where social responsibility is integrated with their engineering. Recognition of CSR may not be necessary for implementation of such topics, however, and implicit methods, such as microinsertions, may be beneficial in teaching students who may be more resistant to non-technical topics, as well as ground technical problems in the situational reality of professional practice. The lack of student interest in interviews related to CSR and the concern of students that the technical courses should remain implies that explicit CSR may not be as openly received by students, and in some cases deter them. These findings indicated two concerns about integrating CSR education in department courses:

1) Introduction of ethics into technical courses will disengage students
2) The non-technical topics will take up valuable time needed to teach technical topics

Implicit methods would allow for integration without as much student pushback, and in the long run narrow the sociotechnical gap. Towards the end of the interview with Charlie, the interviewer went through the Geological Engineering curriculum class by class, and Charlie was able to identify several more areas of CSR integration than his original response. While the term CSR was not used in these integrations, several topics under the umbrella of CSR were such as water contamination, and building for all aspects of a community.

There is also a trend from professor interviews that more CSR integration throughout the programs is important, which is further supported by the majority of students indicating that they would like to see more CSR in their coursework. One of the major limitations seems to be a worry that CSR education would take the space used for technical coursework. This is indicated in the refusal of some interviews based on technical and science-based coursework content, and student responses indicating that while they think CSR is important it must be balanced with the technical topics since they are studying engineering. Furthermore, as indicated in Professor Garcia’s interview, there is a worry that students will be turned off by learning what they perceive as “social science”. We suggest that implicit methods such as microinsertions as proposed by Davis [20] may be a good way to integrate CSR and other macroethical techniques without sacrificing the technical coursework. The interview with Reece further solidified that contextualization of problems helps them feel more realistic and applicable, therefore indicating that these forms of integration into problems and lectures may help anchor technical problems in reality for students and make ethics feel less forced. When increasing the use of these micro-insertions, it is important to consider whether the term CSR needs to be used. In other words, are implicit or explicit methods better when teaching CSR? There is a correlation between explicit teaching and student recognition of CSR themes in courses, however there is no data to support if students need to be able to identify CSR topics in order to implement CSR practices in their careers. This may be an area for future study.

VI. Conclusions

Comparison of professor and student perspectives on CSR education has allowed for an initial glance into forms of teaching that may feel more relevant to students while not hindering professors’
abilities to teach important technical topics. There seems to be an agreement between students and professors that integrating CSR topics are important. It appears that explicit methods and understanding aid in student identification of CSR topics that are being referenced in classes. However, we are unsure if it is necessary for students to be able to identify CSR topics in order to implement CSR practices in their careers. In other words, is it necessary for students to recognize that what they are doing is a form of CSR, or is it enough for them to view their actions as ‘good engineering’? Will this make a difference when the students enter industry? Implicit mentions of CSR may still help bridge the gap between social and technical by not labeling the two as “separate” in the engineering curricula.

In addition to explicit understanding and critical thinking of CSR topics, integration of CSR and other macroethical topics into technical courses may be beneficial to create sociotechnical habits in engineering practice. Different overarching integrations may be required in multi-track specific departments, such as Geological Engineering, though we would still recommend microinsertions where it is possible to help students contextualize problems into the larger systems seen outside of a classroom. Future research can look at the importance of CSR in geological engineering by analyzing what Geological Engineering students’ and professors’ views on CSR more in depth. Furthermore, a separate study into how macroethical topics may be best integrated into multi-track courses may also be beneficial. Greater understanding of other factors such as student level, industry or previous experiences, and more detailed understanding of teaching methods for future research into this topic will be key in helping determine more detailed approaches to integrating CSR and Macroethics into engineering curriculum at the Colorado School of Mines.

VI. Reference


Appendix A - Interview Guide

I. Questions for both groups
   A. What brought you to the Colorado School of Mines?
   B. Why did you decide to become an engineer?
   C. How did you choose your major?
   D. What does the typical day-to-day curriculum you study/teach look like?
   E. Have you heard the term corporate social responsibility before?
      1. When?
      2. Where?
      3. How would you define or describe corporate social responsibility?
      4. Are there other terms you associate with corporate social responsibility?
      5. Do you see any ways petroleum/mining/geological engineering could be used for the social side of engineering? Examples?
      6. Could you give an example of an activity or action that you think falls under CSR?
   F. Do you think corporate social responsibility is an important topic to teach/learn during an undergraduate degree?
      1. Why do you feel this way?

II. Questions for professors:
   A. Do you integrate corporate social responsibility themes into the courses you teach?
      1. Why have you chosen to or not to integrate corporate social responsibility themes into your curriculum?
         a) [if yes than] When did you start doing it?
         b) [if yes than] Was it hard to start?
         c) [if no than] Why not?
   B. How is this affecting your teaching?
   C. Do you think your corporate social responsibility teaching affects student interest and learning?

III. Questions for students:
   A. What is your experience with corporate social responsibility themes in your coursework?
      1. Have you encountered them elsewhere?
      2. Do you have some good or bad examples of corporate social responsibility in coursework?
      3. Have your opinions towards CSR changed due to course experience?
      4. Has your knowledge of CSR changed due to coursework?
   B. Has corporate social responsibility had any influence on your opinions of industry or your job aspirations?
   C. How are your department courses structured (more labs, lectures or both)?
      1. Do you like this set-up? Why or why not?

Appendix B.

1. When did you enter the Colorado School of Mines? [Short Answer]
2. Are you an undergraduate or graduate student?
   a. Undergraduate
   b. Graduate
3. When are you expecting to graduate? [Short Answer]
4. Which of the following would you consider corporate social responsibility (CSR)?
a. Community outreach  
b. Community health and safety  
c. Health and safety of employees  
d. Environmental protection  
e. Educational events  
f. Fundraising  
g. Public relations  
h. Scholarships for the community  
i. Scholarships for future employees  
j. Sustainability  
k. Other…

5. Where do you think you first heard about corporate social responsibility? [Short Answer]
6. Where do you hear about corporate social responsibility most often? [Short Answer]
7. What do you think the most important source of corporate social responsibility knowledge has been for you? [Short Answer]
8. Have you seen corporate social responsibility topics in your classes?
   a. Yes  
   b. No  
   c. Uncertain
9. If so which classes? Which professor taught the course? (Write “none” if answered “no” in previous question) [Short Answer]
10. Do you wish there were more corporate social responsibility themes incorporated into your classes?
    a. Yes  
    b. No  
    c. Maybe
11. Why? [Short Answer]

Appendix C - Course Descriptions

HASS100 - Nature and Human Values
Nature and Human Values will focus on diverse views and critical questions concerning traditional and contemporary issues linking the quality of human life and Nature, and their interdependence. The course will examine various disciplinary and interdisciplinary approaches regarding two major questions: 1) How has Nature affected the quality of human life and the formulation of human values and ethics? (2) How have human actions, values, and ethics affected Nature? These issues will use cases and examples taken from across time and cultures. Themes will include but are not limited to population, natural resources, stewardship of the Earth, and the future of human society. This is a writing-intensive course that will provide instruction and practice in expository writing, using the disciplines and perspectives of the Humanities and Social Sciences. 4 hours lecture/seminar; 4 semester hours.

HASS421 - Environmental Philosophy and Policy
A critical examination of environmental ethics and the philosophical theories on which they depend. Topics may include preservation/conservation, animal welfare, deep ecology, the land ethic, eco-feminism, environmental justice, sustainability, or non-western approaches. This class may also include analyses of select, contemporary environmental issues. Prerequisite: HASS100. Corequisite: HASS200. 3 hours seminar; 3 semester hours

EDNS430 - Corporate Social Responsibility
Businesses are largely responsible for creating the wealth upon which the well-being of society depends. As they create that wealth, their actions impact society, which is composed of a wide variety of stakeholders.
In turn, society shapes the rules and expectations by which businesses must navigate their internal and external environments. This interaction between corporations and society (in its broadest sense) is the concern of Corporate Social Responsibility (CSR). This course explores the dimensions of that interaction from a multi-stakeholder perspective using case studies, guest speakers and field work. Prerequisite: HASS100. Corequisite: HASS200. 3 hours lecture; 3 semester hours.